
Dated: 17 AUGUST 2017

- (1) **THE SECRETARY OF STATE FOR TRANSPORT**
- (2) **HIGH SPEED TWO (HS2) LIMITED**
- (3) **LONDON BOROUGH OF HILLINGDON**



DEED OF AGREEMENT

Relating to High Speed Rail (London - West Midlands) Act 2017

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THIS AGREEMENT BY DEED is made on

17 AUGUST

2017



BETWEEN

- (1) **THE SECRETARY OF STATE FOR TRANSPORT;**
- (2) **HIGH SPEED TWO (HS2) LIMITED**, company number 06791686, whose registered office is at 2 Snowhill, Queensway, Birmingham, England, B4 6GA ("**HS2 Ltd**"); and
- (3) **LONDON BOROUGH OF HILLINGDON**

BACKGROUND

- (A) The High Speed Rail (London - West Midlands) Act 2017 ("**the Act**") providing for a railway transport system between Euston and a junction with the West Coast Main Line at Handsacre and a spur from Water Orton to Curzon Street Birmingham received Royal Assent on 23 February 2017.
- (B) Pursuant to the powers conferred by section 45(1) of the Act the Secretary of State for Transport has by the High Speed (London - West Midlands) (Nomination) Order 2017 (SI No. 184) ("**the Order**") appointed HS2 Ltd as the nominated undertaker for the purposes of the Act as specified in the Order.
- (C) The London Borough of Hillingdon was established under the London Government Act 1963 and has statutory responsibilities for, amongst other things, highways, planning and the preparation of development plans and local development schemes ("**the Council**").
- (D) The Secretary of State for Transport, HS2 Ltd and the Council are entering into this Agreement for the purposes of addressing concerns expressed by the Council as to the potential effects of the provisions of the Act on the London Borough of Hillingdon.
- (E) The parties hereby agree as follows:

OPERATIVE PROVISIONS

1. **Interpretation**

1.1 In this Agreement:-

- | | |
|---|--|
| "AM Peak" | means in respect of traffic flows the hours of 07.30 to 09.30 Monday to Friday excluding public holidays; |
| "the Bill" | means the High Speed Rail (London - West Midlands) Bill as introduced in the House of Lords on 23 March 2016; |
| "Code of Construction Practice" | means the HS2 code of construction practice published in February 2017 as Annex 1 of the environmental minimum requirements accompanying the Act; |
| "the Colne Valley Regional Park Panel" | means the panel established pursuant to the assurance given by the Secretary of State in a letter from Roger Hargreaves (HS2 Ltd) to Mr Alan Goodrum (South Bucks District Council) dated 8 June 2015; |
| "the Compensation Code" | means the collective terms for the legal principles relating to compensation for compulsory acquisition and deriving from Acts of Parliament and case law; |

"the Copthall Cutting"	means the cutting proposed to be formed in connection with the construction of Works Nos. 1/61 and 2/1 in Schedule 1 of the Act (railways) in the London Borough of Hillingdon;
"the Drawings"	means the attached drawings at Appendix 2 marked U43 U45 U46 Diversion, and U49 U50 Diversion;
"Environmental Minimum Requirements"	means the environmental requirements set out in Section 3 of the Environmental Minimum Requirements General Principles published in February 2017;
"the Environmental Statement"	means the Environmental Statement accompanying the Bill;
"the Gatemead and West Ruislip Retained Embankments"	means the embankments proposed to be formed in connection with the construction of Works Nos. 1/61 and 1/66 in Schedule 1 of the Act (railways);
"the Harvil Road Embankments"	means the embankments proposed to be formed in connection with the construction of Works Nos. 1/76 and 2/1C in Schedule 1 of the Act (realignment and diversion of Harvil Road) in the London Borough of Hillingdon;
"HGV"	means a heavy goods vehicle with a weight over 3,500 kilograms being used in the construction of the Proposed Scheme;
"highway authority"	has the same meaning as in the Act;
"HS2 Works"	means those works authorised by the Act together with all necessary works and conveniences to be authorised to be constructed by HS2 Ltd in the London Borough of Hillingdon;
"the GSP"	means the Ickenham grid supply point identified as the 'National Grid Feeder Station' on map CT-06-19b in the CFA 7 Map Book;
"GSP Option 2"	means the option for the relocation of the GSP to a position approximately 200m southwards along the line of the diverted overhead electricity line and away from South Harefield as shown marked 'GSP Option 2' on the attached plan (Appendix 3) marked Plan 1 Figure 1, together with such landscaping and/or screening as is reasonable for the preservation of the local environment or local amenity;
"limits and powers set out in the Act"	means: <ul style="list-style-type: none"> (a) the limits of deviation and the limits of land to be acquired or used as described in the Act in respect of which the power to compulsorily acquire and use land may be exercised; and

	(b) the powers to construct and maintain works with the benefit of deemed planning permission as described in the Act for the purposes of the Proposed Scheme;
"Nominated Undertaker"	means a person other than HS2 Ltd whose name appears in an order made under section 45(1) of the Act;
"Portal Excavated Material"	means the material excavated in connection with the construction of Works Nos. 1/1, 1/15, and 1/61 in Schedule 1 of the Act;
"Plot 720d"	means the parcel of land numbered 720d in the London Borough of Hillingdon shown on Sheet No. 2-04 of the plans deposited with the Bill;
"PM Peak"	means in respect of traffic flows the hours of 16.00 to 18.00 Monday to Friday excluding public holidays;
"the Secretary of State"	means the Secretary of State for Transport or any successor Secretary of State or Minister holding the Transport portfolio and includes so far as relevant any Nominated Undertaker;
"the Proposed Scheme"	means Phase One of HS2;
"the Ruislip Golf Course Plots"	means the parcels of land at West Ruislip Golf Course numbered 441, 442, 458, 459, 460 in the London Borough of Hillingdon as shown on Sheet No. 1-34 of the plans deposited with the Bill;
"Swakeleys Roundabout"	means the roundabout junction of the slip roads of the A40 Western Avenue with the B483 Park Road and B467 Swakeleys Road in the London Borough of Hillingdon shown on Replacement Sheet No. 1-50 of the plans deposited with the Bill;
"the Uxbridge Golf Course Plots"	means the parcels of land at Uxbridge Golf Course numbered AP4-9, AP4-10, AP4-11, AP4-12, AP4-13, AP4-14, AP4-15, AP4-16, AP4-17, AP4-18, AP4-19, AP4-20 and AP-21 in the London Borough of Hillingdon as shown on Replacement Sheet Nos 1-49, 1-50, 2-01 and 2-02 of the plans deposited with the Bill;
"Utilities Works"	means any utility works to be carried out as part of or in consequence of the HS2 Works in exercise of the powers conferred by the Act or otherwise; and
"West Ruislip Railhead"	means Works Nos. 1/66 in Schedule 1 of the Act (temporary railways) in the London Borough of Hillingdon.

1.2 Words importing one gender include every gender.

- 1.3 Words importing the singular include the plural and vice versa.
- 1.4 Words importing persons include firms companies and corporations and vice versa.
- 1.5 Any reference to any statute (whether or not specifically named) shall include any statutory modification or re-enactment of it for the time being in force.
- 1.6 Where any obligation is undertaken by two or more persons jointly those persons shall be jointly and severally liable in respect of that obligation.
- 1.7 Any obligation on any party not to do or omit to do anything shall be deemed to include an obligation not to allow that thing to be done or omitted to be done by any person under its control.
- 1.8 The headings to the clauses and schedules of this Agreement are for ease of reference only and shall not affect the construction or meaning of this Agreement.
- 1.9 Any consent, approval, authorisation or notice required or given under this Agreement shall only take effect if given in writing.

2. **Plot 720d**

HS2 Ltd will not use Plot 720d for the purposes of sustainable placement as described in the Environmental Statement CFA 7 Vol 2 paragraph 2.2.7 page 14.

3. **Uxbridge Golf Course**

- 3.1 When undertaking works in relation to the installation of the tunnel boring machine (TBM) power supply to the western edge of Uxbridge Golf Course HS2 Ltd will ensure that these works are undertaken to reduce, so far as reasonably practicable, the impact of these works on Uxbridge Golf Course and to avoid, so far as reasonably practicable, the removal of any trees that are, at the time of the works, situated on Uxbridge Golf Course.
- 3.2 Without prejudice to the provisions of Part 1 of Schedule 33 to the Act, HS2 Ltd will make good any damage to the public footpaths which cross Uxbridge Golf Course arising as a consequence of the works in relation to the TBM power supply at this location to the reasonable satisfaction of the local highway authority.

4. **Public Rights of Way**

General

- 4.1 HS2 Ltd will use reasonable endeavours to ensure that any diversions of the public rights of way shown on the Drawings which are required as a result of the Proposed Scheme are implemented broadly in accordance with the Drawings and the arrangements described in the construction phasing summary attached at Appendix 1.
- 4.2 HS2 Ltd shall remain open to further discussions with the Council in respect of proposals for alternative routes for the diversions of the public rights of way shown on the Drawings so far as reasonably practicable and provided that such alternative routes:-
 - 4.2.1 can in the view of HS2 Ltd in its absolute discretion be delivered within the limits and powers set out in the Act; and
 - 4.2.2 do not create any new or different significant impacts that have not been assessed in the Environmental Statement.

Breakspear Road South Underpass - U47

- 4.3 HS2 Ltd will implement, subject to the agreement and approval of the Traffic Signal Authority for Greater London, in consultation with the Council, the proposals for temporary traffic signals and the associated systems of control described as 'Signal Control Option 3'

as set out in the report with Document Reference C221-MMD-TM-NOT-010-600029, Revision P01 dated 5th November 2015 ("Signal Control Option 3").

- 4.4 HS2 Ltd will ensure, in carrying out works to deliver Signal Control Option 3, that the segregated part of the surface of the existing carriageway of Breakspear Road South Underpass beneath the rail bridge, where pedestrians may be expected to walk, shall be surfaced and lit for pedestrian purposes in accordance with applicable standards and to the Council's reasonable satisfaction as local highway authority.
- 4.5 HS2 Ltd will carry out a flood risk assessment of the impacts of the HS2 Works north and south of the Chiltern Lines on Breakspear Road South and this assessment will include an assessment of the drainage and flooding impacts of the works to deliver Signal Control Option 3 on Breakspear Road South and the River Pinn. The flood risk assessment will be undertaken in consultation with the Lead Local Flood Authority (as defined in the Flood and Water Management Act 2010) and will seek to identify reasonable drainage measures, if any, to seek to ensure that any drainage and flooding impacts of works to deliver Signal Control Option 3 will not hamper the safe movement of pedestrians at the Breakspear Road South Underpass, and HS2 Ltd will use reasonable endeavours to implement Signal Control Option 3 including the measures identified in the flood risk assessment as far as reasonably practicable as part of the construction of the Proposed Scheme provided that such measures can in the view of HS2 Ltd in its absolute discretion be delivered within the limits and powers set out in the Act.
- 4.6 Following the completion of the construction works for the Proposed Scheme which require the diversions of those public rights of way shown on the Drawings which are required as a result of the Proposed Scheme, HS2 Ltd will, subject to the agreement of and the adoption by the Council, not remove those temporary changes to U47 that the Council considers would enable it to subsequently connect U47 to U51.

Clack Lane to the Greenway - U81

- 4.7 HS2 Ltd will, during detailed design, consult the Council on the design of the proposed approach ramp and that section of the route of the diverted footpath U81 between the high speed railway authorised by the Act and the Chiltern Main Line (as shown on drawing C221-MMD-CV-DPL-010-640501-PET000000 at Appendix 4 to this Agreement) to ensure that this part of the diverted footpath U81 will be appropriately surfaced and lit in accordance with applicable standards and will include appropriate safety measures to provide a safe pedestrian way to the Council's reasonable satisfaction.

5. Traffic- Swakeleys Roundabout

- 5.1 HS2 Ltd agrees to implement the following works at Swakeleys Roundabout, subject to the conditions in clause 5.2 first being satisfied:

- 5.1.1 partial signalisation of the Swakeleys Roundabout; and
- 5.1.2 the addition of localised carriageway widening within the highway boundary and associated changes to lane markings.

- 5.2 The conditions referred to in clause 5.1 are:

- 5.2.1 HS2 Ltd reaching agreement with the Council and Transport for London on the programme, timing and extent of the works to be carried out pursuant to clause 5.1 before 30 September 2017 (HS2 Ltd and the Council each using reasonable endeavours and working in good faith to do so);
- 5.2.2 HS2 Ltd securing all necessary consents and permissions to carry out the works pursuant to clause 5.1 in accordance with the requirements of the schedule for the HS2 Works (HS2 Ltd using reasonable endeavours to secure them); and

- 5.2.3 the highway authority agreeing to adopt, retain and maintain the works carried out by HS2 Ltd pursuant to clause 5.1 upon completion of such works by HS2 Ltd.
- 5.3 Nothing in this paragraph 5 shall require HS2 Ltd to execute any works outside the limits and powers set out in the Act or to implement any measures that would impact on the timely, economic and safe delivery of the Proposed Scheme or would give rise to any significant environmental impacts not assessed in the Environmental Statement.
6. **Traffic – HGV Movements**
- 6.1 Subject to the conditions set out in paragraph 6.4, HS2 Ltd will use reasonable endeavours to attain a maximum of 550 HGV movements per day (or fewer if the measures below permit) at Swakeleys Roundabout, and reduce so far as reasonably practicable the number of HGV movements at Swakeleys Roundabout during the AM Peak and PM Peak, including by implementing one or more of the following measures:
- 6.1.1 the re-use of the soil excavated from Copthall Cutting to construct the Harvil Road Embankments (with a notional target volume of 74,000m³ or more);
- 6.1.2 the commencement of importation of engineering material for Gatemead and West Ruislip Retained Embankments as early as reasonably practicable in the programme for the HS2 Works;
- 6.1.3 the use of excavated material from Copthall Cutting for the construction of the interval embankment between the HS2 railway line and the Chiltern railway line (with a notional target volume of 11,000m³ or more); and
- 6.1.4 the placement of all or part of the Portal Excavated Material at Ruislip Golf Course, subject to HS2 Ltd, having used reasonable endeavours to do so, entering into an agreement with the Council, including necessary consents, on terms agreeable to both parties (acting reasonably) for the placement of that material at the Ruislip Golf Course (with a notional target volume of 60,000m³ or more).
- 6.2 Subject to the conditions set out in paragraph 6.4, HS2 Ltd will (where necessary working with the Council) use reasonable endeavours to seek to reduce significantly or potentially eliminate sustainable placement between Harvil Road and Breakspear Road South as part of which HS2 Ltd will use reasonable endeavours to implement one or more of the following measures:
- 6.2.1 the re-use of soil excavated from Copthall Cutting (notional target volume of 74,000m³ or more as mentioned in clause 6.1.1) to construct the Harvil Road Embankments;
- 6.2.2 the use of excavated material from Copthall Cutting for the construction of the interval embankment between the HS2 railway line and the Chiltern Main Line (notional target volume 11,000m³ or more as mentioned in clause 6.1.3);
- 6.2.3 if HS2 Ltd implements the measures in clause 11.2.1, the placement of excavated material (notional target volume 135,000m³ or more) from Copthall Cutting at Uxbridge Golf Course, subject to HS2 Ltd, having used reasonable endeavours to do so, entering into an agreement with the Council on terms agreeable to both parties (acting reasonably) for the placement of material at Uxbridge Golf Course;
- 6.2.4 the creation of loading sidings at the West Ruislip Railhead by Harvil Road as early in the programme for the HS2 Works as is reasonably practicable in order to remove additional material excavated from Copthall Cutting by rail (notional target volume 15,000m³ or more).

- 6.3 HS2 Ltd will (where necessary working with the Council) use reasonable endeavours to maximise so far as reasonably practicable the removal from the London Borough of Hillingdon of excavated material by rail (including material excavated for the Copthall Cutting) during the HS2 Works in order to seek to reduce sustainable placement and the construction traffic effects on the London Borough of Hillingdon, subject to the following conditions:
- 6.3.1 HS2 Ltd being satisfied that doing so would not have any material adverse impacts on rail passenger services and train operating companies;
 - 6.3.2 the measures being reasonably practicable having regard to any material adverse impact on the safe, timely and economic construction of the HS2 Works, and in the consideration of timeliness and economy, HS2 Ltd will have regard to any associated benefit in terms of the reduction in HGV movements in the London Borough of Hillingdon; and
 - 6.3.3 HS2 Ltd being satisfied that the implementation of the measures in the assurances would not give rise to any significant environmental impacts which have not previously been assessed in the Environmental Statement.
- 6.4 The assurances given in paragraphs 6.1 and 6.2 are subject to the following conditions as appropriate:
- 6.4.1 the measures being reasonably practicable having regard to any material adverse impact on the safe, timely and economic construction of the HS2 Works;
 - 6.4.2 HS2 Ltd being satisfied following ground investigations and laboratory testing that the material excavated from the Copthall Cutting is appropriate for use for the construction of the Harvil Road Embankments or, as the case may be, the interval embankment between the HS2 railway line and the Chiltern Main Line or elsewhere;
 - 6.4.3 HS2 Ltd being reasonably satisfied following the carrying out of ecological surveys that there are no likely significant environmental impacts arising from the placement of the material at the sites mentioned in paragraphs 6.1 or 6.2 as relevant; and
 - 6.4.4 HS2 Ltd being satisfied (acting reasonably) that the implementation of the measures in the assurances would not give rise to any significant environmental impacts which have not previously been assessed in the Environmental Statement.
- 6.5 In HS2 Ltd's consideration of whether the measures referred to at clause 6.4.1 are reasonably practicable having regard to any material adverse impact on the timely and economic construction of the HS2 Works HS2 Ltd will have regard to any associated benefit in terms of the reduction in HGV movements or the reduction in sustainable placement, as relevant, in the London Borough of Hillingdon.
- 6.6 HS2 Ltd will consider further the following additional proposals to reduce the number of HGVs in the Swakeleys Roundabout area and to reduce the amount of sustainable placement at the time of detailed design of the HS2 Works:
- 6.6.1 the replacement of all or part of the Gatemead and West Ruislip Retained Embankments with viaduct so as to reduce the need for fill material to be imported, and for alluvial material to be exported, by road; and
 - 6.6.2 the relocation of the concrete segment plant from the Swakeleys Roundabout area in order to reduce the environmental impact of the additional land required at Harvil Road.

- 6.7 HS2 Ltd will keep the Council reasonably informed about its further consideration under clause 6.6 and to take reasonable steps to take into consideration any reasonable comments made by the Council in response.
- 6.8 Nothing in this clause 6 shall require HS2 Ltd to execute any works outside the limits and powers set out in the Act or to implement any measures that would impact on the timely, economic and safe delivery of the Proposed Scheme or would give rise to any significant environmental impacts not previously assessed in the Environmental Statement.
- 6.9 HS2 Ltd will continue to engage actively with Transport for London and the Council to seek to identify further traffic management measures to manage the remaining HGV movements.
- 6.10 As part of the process mentioned in clause 6.9, HS2 Ltd will include the Council in early and continuing discussions with its contractors as it considers appropriate to seek to ensure that if the measures mentioned in clause 6.1.1 to 6.1.4 do not result in more than 550 HGV movements per day at Swakeleys Roundabout as mentioned in clause 6.1.
- 6.11 In using reasonable endeavours to attain the target of no more than 550 HGV movements per day at Swakeleys Roundabout as mentioned in clause 6.1, HS2 Ltd may include the development of other or alternative measures subject to the conditions in clause 6.4 and provided that such measures are, in the view of HS2 Ltd in its absolute discretion, deliverable within the limits and powers set out in the Act; and would not create any new or different significant impacts that have not been assessed in the Environmental Statement.

7. Construction Workforce Travel Plans

- 7.1 HS2 Ltd will ensure that construction workforce travel plans are prepared by the lead contractors, in line with the Code of Construction Practice, following engagement with the Council as local highway and planning authority, with the aim of encouraging the use of sustainable modes of transport to reduce the impact of workforce travel on local residents and businesses in the London Borough of Hillingdon.
- 7.2 HS2 Ltd will include within the construction workforce travel plans the following:
- 7.2.1 identification of a travel plan co-ordinator and a description of their responsibilities;
 - 7.2.2 key issues to consider for each compound/construction site or group of sites;
 - 7.2.3 site activities and surrounding transport network including relevant context plans;
 - 7.2.4 anticipated workforce trip generation and how it may change during the construction process;
 - 7.2.5 travel mitigation measures that will be introduced to reduce the impact of the construction workforce on the transport network and services;
 - 7.2.6 measures to control on-site parking provision and promoting travel by public transport where available;
 - 7.2.7 targets to reduce individual car journeys by the construction workforce;
 - 7.2.8 methods for surveying workforce travel patterns;
 - 7.2.9 the process for monitoring and reviewing the construction workforce travel plan; and
 - 7.2.10 proposals for transport of construction workforce and measures to ensure safe access to and from site.

- 7.3 HS2 Ltd's objectives to support the aim at clause 7.1 will include;
- 7.3.1 effective management of HS2 construction workforce travel to reduce so far as is reasonably practicable any damage to the environment, impact on the surrounding road network, danger to road users and disturbance to neighbouring properties; and
 - 7.3.2 the introduction of measures to reduce single occupancy car journeys by HS2 construction workers through the encouragement of car-sharing, use of available public transport, shuttle buses, cycling and walking to work where reasonably practicable.
- 7.4 HS2 Ltd shall undertake regular HS2 construction workforce travel surveys and share the results with the Council.
- 7.5 HS2 Ltd will require its contractors to monitor compliance with the requirements of the Code of Construction Practice, and this will include the maintenance of records of traffic management measures. The monitoring programme, the approach to regular consultation with highway authorities and emergency services and the control processes is set out in the Code of Construction Practice.
- 8. Ickenham Grid Supply Point**
- 8.1 HS2 Ltd agrees to relocate the GSP to the location identified for the GSP Option 2 or such other GSP location as far southwards from the location identified in the Act along the line of the diverted overhead electricity line and away from South Harefield as is reasonably practicable given any requirements of National Grid and the results of the requisite surveys provided that:
- 8.1.1 HS2 Ltd obtains (using reasonable endeavours to do so) all the necessary third party consents and approvals within such a timeframe as to allow, in the opinion of HS2 Ltd in its absolute discretion, for the relocation to GSP Option 2 or such other more southerly GSP location;
 - 8.1.2 the GSP Option 2 or such other more southerly GSP location can in the opinion of HS2 Ltd in its absolute discretion be delivered within the allocated budget for the Proposed Scheme, within the limits and powers set out in the Act, and without compromising the safe, timely and economic delivery of the Proposed Scheme; and
 - 8.1.3 the GSP Option 2 or such other more southerly GSP location would not give rise to any new or different significant environmental impacts from those assessed in the Environmental Statement.
- 8.2 The Council agrees to provide such access (at no cost to HS2 Ltd) as HS2 Ltd requires for the purposes of undertaking surveys and investigations in relation to the implementation of the GSP Option 2 or such other proposed southerly location, within 7 days of HS2 Ltd requesting such access.
- 9. Construction Vehicles**
- 9.1 HS2 Ltd will ensure that all HGVs that enter the London Low Emission Zone during construction of the Proposed Scheme for the purposes of transporting excavated material will be powered by EURO VI (or lower emission) engines.
- 10. Land take at Uxbridge Golf Course and Ruislip Golf Course**
- 10.1 Subject to clause 10.4, the Secretary of State shall not exercise the powers of compulsory acquisition conferred by the Act in respect of any of the Uxbridge Golf Course Plots that are not required for any permanent HS2 Works in the London Borough of Hillingdon and where those plots are required temporarily HS2 Ltd may exercise the powers of Schedule 16 to the Act to enter and take temporary possession of these plots.

- 10.2 Subject to clause 10.4, the Secretary of State shall not exercise the powers of compulsory acquisition conferred by the Act in relation to those of the Ruislip Golf Course Plots that are not required for any permanent HS2 Works but instead HS2 Ltd may exercise the powers of Schedule 16 to the Act to enter and take temporary possession of the property subject to:
- 10.2.1 the Council entering into an agreement in a form satisfactory to the Secretary of State and HS2 Ltd which provides for the maintenance of the environmental mitigation to be provided on or by that land (for the avoidance of doubt including the making of payment of a reasonable sum or sums to the Council for undertaking that maintenance); and
- 10.2.2 the Secretary of State and HS2 Ltd being satisfied that the Council is an appropriate person, having regard to the nature and objectives of the mitigation required to be provided, to be responsible for securing the maintenance of that mitigation.
- 10.3 In its application to the plots required temporarily mentioned in clauses 10.1 and 10.2 above, for the period of 28 days mentioned in sub-paragraph 4(1) of Schedule 16 to the Act there shall be substituted a period of 3 months.
- 10.4 Clauses 10.1 and 10.2 are conditional on the Council and HS2 Ltd reaching agreement, in a form reasonably acceptable to HS2 Ltd, as to the level of compensation payable under paragraph 4 of Schedule 16 to the Act, in respect of the exercise of temporary powers of the Act in accordance with clause 10.1 and 10.2, having regard to clause 10.5.
- 10.5 In consideration for the Secretary of State agreeing not to exercise its powers of permanent acquisition in clauses 10.1 and 10.2 above the Council agrees that the compensation payable to it by HS2 Ltd as a result of the exercise of the powers of temporary possession under Schedule 16 of the Act will not be greater than the overall cost to the Proposed Scheme of acquiring the land under Section 4 of the Act having regard to the current use of the land and disregarding any future development opportunity.

11. **Golf Courses**

- 11.1 The parties agree the following in relation to Ruislip Golf Course:
- 11.1.1 HS2 Ltd will at its own cost use reasonable endeavours to:
- 11.1.1.1 prepare and submit a planning application for the implementation of a scheme reconfiguring such of the Ruislip Golf Course site as is not required for the Proposed Scheme with the design of such a reconfiguration scheme to be based on Option 3 of Gaunt Golf Design Report dated 5 May 2015 (Appendix 6 to this Agreement) to:
- (a) include the creation of a 9 hole golf course and a 6 hole academy course;
- (b) incorporate the environmental mitigation works to be carried out in the vicinity of the reconfigured golf course site as part of the Proposed Scheme; and
- (c) include, subject to HS2 Ltd first reaching agreement with the Ruislip Rifle Club (being the rifle club on Ickenham Road howsoever constituted and operated) in respect of any compensation claim Ruislip Rifle Club may have as a consequence of the exercise of the powers of the Act by the Secretary of State or HS2 Ltd and such agreement making provision for or reflecting the proposed reinstatement of its rifle club facility in the way envisaged by this paragraph, a rifle club facility adjacent to or

reasonably near the existing golf club house (which is not to be affected by the proposed reconfiguration);

11.1.1.2 if and when planning permission is granted for the planning application referred to in clause 11.1.1.1, implement that planning permission as expeditiously as is reasonably practicable in order to seek to bring the reconfigured golf course into operation as soon as is reasonably practicable; and

11.1.1.3 seek to reduce HGV movements within the vicinity of Ruislip Golf Course by using as much suitable excavated material arising from the excavation of the West Ruislip Portal as part of the HS2 Works as is reasonably practicable within the implementation of the reconfiguration scheme referred to in clause 11.1.1.1 or in an earthwork alongside the HS2 alignment subject to the conditions in clause 11.3 and 11.4.

11.1.2 The Council will:

11.1.2.1 cooperate and assist in the preparation and submission of the planning application referred to in clause 11.1.1.1 and any related application for any necessary consents required for the reconfiguration of the golf course; and

11.1.2.2 grant to HS2 Ltd within 14 days of the date of this Agreement such licences and permissions for access to its land as HS2 Ltd requires for it to carry out ground investigation or ecological surveys in relation to the above proposed reconfiguration of the golf course.

11.2 The parties agree the following in relation to Uxbridge Golf Course:

11.2.1 Subject to HS2 Ltd implementing the Haul Road HS2 Ltd will, at its own cost, use reasonable endeavours to:

11.2.1.1 incorporate as much of the suitable excavated material arising from excavation of Copthall Cutting as part of the HS2 Works that would otherwise be located between Breakspear Road and Harvil Road into the reinstatement referred to in clause 11.2.1.2 as is reasonably practicable subject to the conditions in clauses 11.3 and 11.4.

11.2.1.2 carry out such works as it reasonably considers appropriate in order to reinstate that part of Uxbridge Golf Course (together with the reinstatement of the five currently abandoned holes) based on the Gaunt Golf Design Report dated 11 October 2016 (Appendix 6 to this Agreement) to provide an 18 hole golf course subject to HS2 Ltd having the necessary powers in the Act and/or securing any necessary consents or approvals, and the provision by the Council at no cost to HS2 Ltd of any additional land that may reasonably be required and provided that doing so would not give rise to any significant environmental impacts which have not previously been assessed in the Environmental Statement.

11.2.2 The Council will:

11.2.2.1 engage with HS2 Ltd and its contractors in the development of any designs for and or the implementation of the reinstatement referred to in clause 11.2.1.2 and support any application(s) by HS2 Ltd or contractors for any necessary consents required for the reinstatement referred to in clause 11.2.1.2; and

- 11.2.2.2 grant to HS2 Ltd within 14 days of receiving a request to do so such reasonable licences and permissions for access to its land as HS2 Ltd requires for it to carry out ground investigation or ecological surveys in relation to the above proposed reinstatement of the golf course.
- 11.2.3 If HS2 Ltd does not implement the Haul Road it shall, in conjunction with the main works contractor who will deliver the HS2 Works, use reasonable endeavours to review and assess, whether (in the opinion of HS2 Ltd) the works in clause 11.2.1 can be delivered within the Secretary of State's allocated budget and without any adverse effect on the safe, timely and economic construction of the HS2 Works. HS2 Ltd will share the outcome of the review with the Council.
- 11.2.4 In the event that the review in 11.2.3 concludes that the works set out in clause 11.2.1 can be carried out within the parameters specified in clause 11.2.3 then, subject to the conditions in clause 11.2.2 being satisfied HS2 Ltd will use reasonable endeavours to implement these works.
- 11.3 The conditions referred to in clause 11.2.1.1 are:
 - 11.3.1 the measures being reasonably practicable having regard to any material adverse impact on the safe, timely and economic construction of the HS2 Works, but where in his consideration of timeliness and economy, HS2 Ltd will weigh in the balance the associated benefit in terms of the reduction in sustainable placement, as relevant;
 - 11.3.2 HS2 Ltd being satisfied following ground investigations and laboratory testing that the material excavated is appropriate for use in the proposed way;
 - 11.3.3 HS2 Ltd being reasonably satisfied following the carrying out of ecological surveys that there are no likely significant environmental impacts arising from the placement of the material at the sites mentioned in the paragraph concerned; and
 - 11.3.4 HS2 Ltd being reasonably satisfied that the implementation of the measures in the assurances would not give rise to any significant environmental impacts which have not previously been assessed in the Environmental Statement.
- 11.4 The commitments made in clauses 11.1 and 11.2 are subject to the following conditions:
 - 11.4.1 HS2 Ltd being satisfied that the commitments can be implemented without compromising the safe, economic and timely construction and operation of the Proposed Scheme; and
 - 11.4.2 HS2 Ltd securing any and all necessary consents, approvals, licences, land interests and rights in land as may be needed to comply with the commitments in the clauses.
- 11.5 The Council agrees and confirms that the implementation by HS2 Ltd of any or all of the projects set out in clauses 11.1 and 11.2 above when completed, will subject to clause 14.1 being satisfied, constitute full and final settlement of any future compensation or restoration claim by the Council in consequence of the construction and operation of the Proposed Scheme in relation to the Ruislip Golf Course and Uxbridge Golf Course as relevant.
- 11.6 HS2 Ltd confirms that the implementation of any or all of the projects set out in clauses 11.1 and 11.2 will not prejudice any application by the Council or any other local body to the HS2 Community and Environment Fund and the Business and Local Economy Funds, to the extent that bodies in Hillingdon entitled to bid for local grants as described in HS2 Information Paper C12 are not precluded from doing so by this clause.

- 11.7 In this clause the "Haul Road" means the proposed temporary haul road through Uxbridge Golf Course and described at paragraph 5.2 (AP4-006-004) of the Volume 2 Community Forum Area 7 Report in Volume 2 of the Supplementary Environmental Statement 3 and Additional Provision 4 Environmental Statement deposited in Parliament in October 2015.
12. **Hillingdon Outdoor Activities Centre**
- 12.1 HS2 Ltd commissioned a review of the estimated costs for the implementation of the Denham Quarry Option by an independent person agreed by the Council, which concluded that the estimated costs for the implementation of this Option are greater than £26.5 million (twenty six million five hundred thousand pounds).
- 12.2 The Council will therefore, use reasonable endeavours, working together with the Association, to within three years from the date of this Agreement design and implement a scheme for the relocation of HOAC to Denham Quarry or such other suitable site or sites to be agreed with HS2 Ltd, the Association and the relevant local authorities at a cost of no greater than £26.5 million (twenty six million five hundred thousand pounds).
- 12.3 In the event that the Association decides that it does not wish to continue to participate in the provision of HOAC facilities in their current form or their reasonable alternative at either Denham Quarry or any other suitable site or sites the Council shall give notice to HS2 Ltd that their working arrangement with the Association has ended. Upon the service of such a notice, the Council will use reasonable endeavours to find another suitable organisation to work with or it will act alone to provide an alternative form of outdoor facilities to be agreed with HS2 Ltd whose agreement is not to be unreasonably withheld at Denham Quarry or such other suitable site or sites to also be agreed with HS2 Ltd and the relevant local authorities at a total cost of no greater than £26.5 million (twenty six five hundred thousand pounds).
- 12.4 If the event described in clause 12.3 occurs, the period of three years in clause 12.2 will be extended by agreement between the Council and HS2 Ltd with both parties acting reasonably.
- 12.5 Subject to the conditions in clause 12.6 HS2 Ltd will provide the Council with funding up to a maximum overall sum of £26.5 million (twenty six million five hundred thousand pounds) as required for the implementation of one or the other schemes as described in clauses 12.2 and 12.3.
- 12.6 The conditions referred to in clause 12.5 are:
- 12.6.1 the Council using reasonable endeavours to design and implement one or other of the schemes described in clauses 12.2 and 12.3;
 - 12.6.2 HS2 Ltd being satisfied that the scheme being pursued by the Council can be implemented without compromising the safe, economic and timely construction and operation of the Proposed Scheme;
 - 12.6.3 in the case of a scheme described in clause 12.2 HS2 Ltd being satisfied as to the viability of the operation of HOAC as part of that scheme;
 - 12.6.4 the Council securing any and all necessary consents, approvals, licenses, land interests and rights in land as may be needed to implement a scheme within three years from the date of this Agreement or any extension of this period agreed pursuant to clause 12.4;
 - 12.6.5 the Council and HS2 Ltd agreeing (such agreement not to be unreasonably withheld) the detailed plans and specification including an indicative budget for one or other of the schemes ("the **Works Specification**");
 - 12.6.6 any subsequent variations to the Works Specification or variations to the building contracts impacting on the agreed budget will not be implemented

- without the Council first obtaining the approval of HS2 Ltd (not to be unreasonably withheld);
- 12.6.7 the Council agrees to tender the contract for the design and construction of one or other of the schemes based on the agreed Works Specification in order to demonstrate value for money in respect of the design and construction of one or another of the schemes and the final contract sum;
- 12.6.8 the Council will consult with HS2 Ltd following its analysis of the responses to the tender and shall not appoint a contractor without HS2 Ltd's prior written approval (not to be unreasonably withheld);
- 12.6.9 the Council will regularly inform, report to and liaise with HS2 Ltd on all matters relating to the works to implement one or other of the schemes and any variations of them;
- 12.6.10 the Council will keep adequate records and account to HS2 Ltd on at least a quarterly basis for any sums provided to it by HS2 Ltd under clause 12.5;
- 12.6.11 the Council will, subject to clause 12.12, promptly return any sums provided to it by HS2 Ltd under clause 12.5 which has not been incurred on one or other of the schemes; and
- 12.7 In the event that a scheme for the relocation of HOAC is agreed in accordance with clause 12.2, the Council subject to ensuring that it is fully compliant with all rules relating to Voluntary Sector Grants and also subject to clause 12.8 agrees to maintain its grant funding for HOAC for at least ten years from the date of completion of the scheme to assist with its operating costs, in the following way:
- 12.7.1 maintaining at least its current level of grant funding for the first five years of such ten year period; and
- 12.7.2 maintaining a level as is sufficient to meet the requirements of HOAC (as agreed with the Association) but is no greater level for the following five years of the ten year period.
- 12.8 The requirement on the Council to provide grant funding under clause 12.7 to any extent shall not apply if the Association notifies the Council in writing that funding to that extent is not required by it for the provision of HOAC and such letter includes confirmation that HOAC can continue operating without such funding.
- 12.9 The Council undertakes to the Secretary of State and HS2 Ltd not to make any claim for compensation arising from the exercise by the Secretary of State and/or HS2 Ltd of any of the powers of the Act in respect of any part of the HOAC Land and hereby further agrees that payment of any funding pursuant to clause 12.5 is in full and final settlement of any claim the Council may have against the Secretary of State or HS2 Ltd in respect of HOAC or the HOAC Land.
- 12.10 The Council will secure that HOAC and the Association vacates that part of the HOAC Land within the Act limits by the end of the HOAC main operating season for 2018 (at the date of this Agreement expected to be in October 2018) or such later date as notified by HS2 Ltd to the Council.
- 12.11 In the event that one or other of the schemes mentioned in clauses 12.2 is not agreed or implemented or that the Association ceases to participate in the delivery of any such scheme for any reason then the Council agrees that the cost to the Secretary of State and or HS2 Ltd of any claim for compensation that the Association may have in accordance with the Compensation Code in relation to the impact of the proposed Scheme on HOAC shall be deducted from the amount of funding made available in accordance with clause 12.5 to the effect that the maximum sum of £26.5 million shall be reduced by the amount of any compensation payable to the Association.

- 12.12 In the event that the cost of designing and implementing one or other of the schemes in accordance with clauses 12.2 and 12.3 does not require a funding contribution from HS2 Ltd up to the maximum level of £26.5 million then the maximum sum of £2 million (two million pounds) referred to in clause 13.1 (local amenity fund) will be increased by the amount remaining in the identified £26.5 million up to a maximum increase of £6 million (six million pounds) (with the effect that the Local Amenity Fund may only be increased up to a maximum of £8 million).
- 12.13 In the event that the Secretary of State or HS2 Ltd exercises the powers of compulsory acquisition conferred by the Act over any part of the HOAC Land and, following construction of the Proposed Scheme, disposes or surrenders that part of the HOAC Land to the Council, then HS2 Ltd will:
- 12.13.1 meet the reasonable costs of restoring to a reasonable condition that part of the HOAC Land to be returned to the Council or restore that part of the HOAC Land to be returned to the Council in accordance with a scheme to be approved by the Council (not to be unreasonably withheld or delayed) or at the Council's request, to restore that part of the HOAC land to nature; and
- 12.13.2 meet the reasonable costs incurred by the Council of the demolition of the existing HOAC club house.

- 12.14 In this clause 12:

"*the Association*" means the Colne Valley Youth & Community Association (being the charity which operates HOAC);

"*HOAC*" means the Hillingdon Outdoor Activities Centre based at Dews Lane, Harvil Road, Harefield, Middlesex UB9 6JN;

"*the HOAC Land*" means the land shown edged red on the plan attached at Appendix 5 being land in the London Borough of Hillingdon owned by the Council and occupied at the date of this Agreement by HOAC under a lease and/or licence from the Council;

the "*Denham Quarry Option*" means the proposed scheme for relocating HOAC to the Denham Quarry site as more particularly set out in the design and access statement which accompanied the planning application for the relocation of Hillingdon Outdoor Activities Centre (HOAC) at New Denham Quarry Denham Road Denham Buckinghamshire UB9 4EH submitted to Buckinghamshire County Council on 6 June 2016 with reference CM/22/16;

13. **Local Amenity Fund**

- 13.1 Subject to the conditions in paragraph 13.2 first being satisfied HS2 Ltd agrees to make phased contributions to the Council on the following terms up to a maximum of £2 million (two million pounds) (subject to any increase by virtue of clause 12.12) to enable the Council to bring forward measures in its area to benefit the local community having regard to the impacts of the Proposed Scheme ("**the Local Amenity Fund**"):
- 13.1.1 the Council will hold and administer the Local Amenity Fund and any administration costs incurred by the Council may be taken from the Local Amenity Fund;
- 13.1.2 HS2 Ltd will provide contributions to the Local Amenity Fund on a phased basis as follows: the first £500,000 (five hundred thousand pounds) will be paid within six months of the date of this Agreement and further contributions (subject to clauses 13.1.3 and 13.1.4) of £500,000 every six months from the date the previous contribution will be paid up to a maximum total payment of £2 million (or increased sum by virtue of clause 12.12).
- 13.1.3 if the Council seeks a contribution to the Local Amenity Fund by HS2 Ltd earlier than the date set out in 13.1.2 above then it may make such a request, with reasons, from HS2 Ltd who may exercise its discretion to provide an early

contribution of up to £500,000 and such a contribution shall be deducted from the next payment date set out in 13.1.2 above;

- 13.1.4 if the Council seeks a contribution to the Local Amenity Fund by HS2 Ltd of greater than £500,000 in any six month period then it may make such a request, with reasons, to HS2 Ltd who may exercise its discretion to provide all or part of such contribution requested and such a contribution shall be deducted from the next payment date or dates (as required) set out in 13.1.2 above provided that (subject to clause 12.9) nothing in this clause shall require HS2 Ltd to exceed the maximum total payment of £2 million referred to in 13.1;
- 13.1.5 the Local Amenity Fund must be allocated by the Council pursuant to the allocation criteria agreed in line with clause 13.2.1;
- 13.1.6 the Council will report to HS2 Ltd on a quarterly basis on the cost, implementation and effect of measures funded by the Local Amenity Fund (in whole or part) and will keep detailed accounts in relation to expenditure from the Local Amenity Fund and produce such accounts upon reasonable request of HS2 Ltd and, in any event, on a quarterly basis; and
- 13.1.7 any money in the Local Amenity Fund which remains unapplied or unallocated by the Council on the date that the HS2 Works are completed shall be returned forthwith by the Council to HS2 Ltd.

13.2 The conditions referred to in clause 13.1 are:

- 13.2.1 HS2 Ltd and the Council agreeing an allocation criteria to ensure that the Local Amenity Fund is spent on measures which would serve to benefit the community in light of the construction and operation impacts of the Proposed Scheme on the local residents and businesses of the London Borough of Hillingdon. Such measures may include (but shall not be limited to) those which seek to provide the enhancement of areas of public realm or local amenities along the route of the Proposed Scheme. For the avoidance of doubt, HS2 Ltd will not be required to provide any phased contribution of the Local Amenity Fund unless and until the allocation criteria has been agreed in line with this clause 13.2.1; and
- 13.2.2 HS2 Ltd being satisfied that the Council has complied with the terms of paragraph 13.1.1 to 13.1.7 in advance of each payment date arising under 13.2.1 above.

13.3 HS2 Ltd confirms that this clause will not prejudice any application by the Council or any other local body to the HS2 Community and Environment Fund and the Business and Local Economy Funds, to the extent that bodies in Hillingdon entitled to bid for local grants as described in HS2 Information Paper C12 are not precluded from doing so by this clause.

14. **Reinstatement of Council Land**

HS2 Ltd will reinstate to the reasonable satisfaction of the Council any land which it occupies, in exercise of the powers of Schedule 16 to the Act, that is in the Council's ownership in accordance with the provisions of Schedule 16 to the Act unless otherwise provided for in this Agreement.

15. **Engagement**

15.1 The Council and HS2 Ltd agree to work collaboratively on the matters contained in this Agreement, save as expressly provided otherwise, and HS2 Ltd agrees to provide reasonable opportunities for the Council to work collaboratively with it, during further project development and detailed design of the HS2 Works, both with each other and any contractor involved in the Proposed Scheme and where appropriate in conjunction with Transport for London.

- 15.2 HS2 Ltd agrees to engage with the Council, as a qualifying authority (as defined in the Act), in respect of the routes by which anything is to be transported on a highway by a large goods vehicle to a working or storage site, a site where it will be re-used, or a waste disposal site in line with paragraph 6 of Schedule 17 to the Act.
- 15.3 HS2 Ltd will report to the Council on at least a twice yearly basis on the progress of the measures it proposes to implement pursuant to the commitments in this Agreement to seek to reduce HGV traffic movements and sustainable placement in the London Borough of Hillingdon and the expected or known results or effects of the same.
- 15.4 HS2 Ltd recognises that the commitments in this Agreement are made without prejudice to the Environmental Minimum Requirements.
- 15.5 This clause 15 does not apply to the matters within clause 17.

16. Mitigation Approach

- 16.1 HS2 Ltd agrees to take an integrated and coordinated approach to the design and delivery of the mitigation measures detailed in this Agreement and the Act in the borough of Hillingdon recognising the role of the Colne Valley Additional Mitigation Plan (to be produced by the Colne Valley Regional Park Panel).

17. Review of Programme

- 17.1 HS2 Ltd will commence a review of the programme for construction of the HS2 Works within six months of the appointment of the main works contractor who will deliver the HS2 Works, with such a review to include consideration of the following elements:

- 17.1.1 the earlier construction and bringing into use of the West Ruislip Railhead off Harvil Road and the use of the same for the importation and exportation of material for the HS2 Works;
- 17.1.2 the earlier construction of any proposed haul roads in the London Borough of Hillingdon to seek to reduce the number of HGVs on the roads in the Borough so far as reasonably practicable; and
- 17.1.3 traffic management measures which may enable a reduction so far as reasonably practicable in the number of HGVs on the roads in the London Borough of Hillingdon in the AM Peak and PM Peak

providing always that any changes to the programme for the construction of the HS2 Works which may be proposed as a result of the review shall not negatively impact the timely, economic and safe delivery of the HS2 Works or any part of them.

- 17.2 HS2 Ltd will commence a review of the programme for construction of the HS2 Works in the event that a material element of the programme for the HS2 Works slips by 12 months or more from the timetable as indicated in the Environmental Statement, with such a review to include consideration of the following measures and also measures which may have been previously identified and discounted, or wholly new measures:

- 17.2.1 the programme for the construction and operation of the West Ruislip Railhead off Harvil Road and the use of that Railhead for the importation and exportation of material for the HS2 Works;
- 17.2.2 the use of West Ruislip Railhead off Harvil Road for the importation of completed tunnel segments and/or raw materials for tunnel segment production;
- 17.2.3 any proposed haul roads in the London Borough of Hillingdon to seek to reduce the number of HGVs on the roads in the London Borough of Hillingdon so far as reasonably practicable; and

- 17.2.4 traffic management measures which may enable a reduction so far as reasonably practicable in the number of HGVs on the roads in the London Borough of Hillingdon in the AM Peak and PM Peak

providing always that any changes to the programme for the construction of the HS2 Works which may be proposed as a result of the review shall not negatively impact the timely, economic and safe delivery of the HS2 Works or any part of them.

- 17.3 HS2 Ltd will engage with the Council in relation to the review(s) to be carried out pursuant to this clause and report on the same to the Council.

18. **Air Quality**

- 18.1 HS2 Ltd agrees to carry out monitoring of air quality (including pre-construction monitoring) in locations adjacent to highways in the London Borough of Hillingdon that have been identified in the Environmental Statement as predicted to experience significant effects as a result of the HS2 Works (if any) in line with the Code of Construction Practice, subject to first reaching agreement with the Council on the locations and securing the consent of the Council (not to be unreasonably withheld) on the installation of monitoring equipment in such locations which shall not exceed 10 locations and the data collected by these instruments will be provided to the Council as set out in section 4.3 of the Code of Construction Practice.

- 18.2 HS2 Ltd will require the contractors involved in the HS2 Works to control and limit dust during the construction of the HS2 Works in accordance with the Code of Construction Practice as far as reasonably practicable and in accordance with best practicable means, which shall include the following measures as appropriate:

- 18.2.1 cleaning (including watering) of haul routes and designated vehicle waiting areas to suppress dust;
- 18.2.2 damping down of dust-generating equipment and vehicles within the site and the provision of dust suppression in areas of sites that are likely to generate dust;
- 18.2.3 keeping soil stockpiles away from sensitive receptors (including historical features), watercourses and surface drains where reasonably practicable, also taking into account the prevailing wind direction relative to sensitive receptors;
- 18.2.4 enclosure, shielding or provision of filters on plant likely to generate excessive quantities of dust beyond the site boundaries;
- 18.2.5 undertaking soil spreading, seeding and planting of completed earthworks following completion of earthworks;
- 18.2.6 undertaking inspection and visual monitoring during the HS2 Works after consultation with the relevant local authorities to assess the effectiveness of the measures being taken to control dust and air pollutant emissions;

19. **Angling**

- 19.1 HS2 Ltd will, working in collaboration with the Council, use reasonable endeavours during the HS2 Works to reduce so far as reasonably practicable interference with the pursuit of angling on the Lakes in the London Borough of Hillingdon outlined in red on the plan attached to this Agreement at Appendix 7.

20. **Programming of utilities**

- 20.1 HS2 Ltd will engage with the Council prior to completion of the detailed design of the traffic management associated with the Utilities Works to be carried out by HS2 Ltd as part of the HS2 Works with a view to reducing as far as reasonably practicable the adverse impact of such Utilities Works on local residents, businesses, schools and the wider community.

- 20.2 HS2 Ltd will have regard to representations made during the engagement referred to in clause 20.1 and, in consultation with the relevant highway authority where this is not the Council, and give consideration to the following factors during the detailed design of the traffic management associated with the Utilities Works to be carried out by HS2 Ltd as part of the HS2 Works:
- 20.2.1 timing such Utilities Works to avoid so far as reasonably practicable seasonal peak periods of activity for schools or businesses, for example by carrying out works during school holidays or outside busy shopping periods;
 - 20.2.2 timing any particularly disruptive short term activities as part of such utilities works to avoid so far as reasonably practicable hours of peak activity for schools or businesses;
 - 20.2.3 co-ordinating any separate elements of such Utilities Works on any particular road so far as reasonably practicable;
 - 20.2.4 phasing such Utilities Works so as to reduce so far as reasonably practicable the overall impact due to associated traffic restrictions in the area; and
 - 20.2.5 taking into account other construction activities relating to the Proposed Scheme in the vicinity of such Utilities Works, such as those at the West Ruislip portal satellite compound and the South Ruislip vent shaft main compound, so as to reduce so far as reasonably practicable the overall amount of traffic disruption associated with the Proposed Scheme in the Ruislip area

providing always that HS2 Ltd shall not be required to implement any measures as a result of this clause which such negatively impact the timely, economic and safe delivery of the HS2 Works or any part of them.

21. **Transfer of Powers**

- 21.1 In the event that any person other than the Secretary of State or HS2 Ltd is appointed as the Nominated Undertaker for the purposes of the provisions of the Bill to which this Agreement relates and the provisions of this Agreement are not otherwise made directly enforceable against any such person ("**the Transferee**") the Secretary of State or HS2 Ltd as the case may be covenants that he will require the Transferee to enter into a direct deed of covenant in favour of the Petitioners that the Transferee shall observe and perform such obligations of the Secretary of State or HS2 Ltd as the case may be as relate to the exercise of the powers which have been transferred as though the Transferee had been an original party to this Agreement.
- 21.2 Upon the Transferee entering into such a direct deed of covenant referred to in clause 21.1 the Secretary of State or HS2 Ltd as the case may be shall be released from the liability to observe and perform such obligations and restrictions under this Agreement as relate to the exercise of the powers that are exercised by the Transferee and the Transferee shall be bound by and may enforce the terms of this Agreement as though it had been an original party to this Agreement.

22. **Savings for Compensation**

- 22.1 Save as expressly provided for, nothing in this Agreement shall prejudice or affect the Council's rights to claim compensation under the Act or any enactment applied by or incorporated in the Act arising in consequence of the exercise of any powers conferred by the Act or under any other enactment that gives the Council a right to compensation as a consequence of the exercise of any powers conferred by the Act, except that the Council shall not be entitled to be compensated in respect of a matter under the Act or any such enactment if they are entitled to compensation under this Agreement in respect of that same matter and in calculating any compensation claim full regard will be had to the terms of this Agreement and in particular the terms of clauses 10, 11 and 12.

22.2 The Council agrees and confirms that the implementation by HS2 Ltd of any or all of the projects set out in clauses 11.1 and 11.2 when completed and any payment made in accordance with clause 12.5 will, subject to clause 13.1 being satisfied, constitute full and final settlement of any compensation or restoration claim by the Council in consequence of the construction and operation of the Proposed Scheme in relation to the Ruislip Golf Course, Uxbridge Golf Course and Hillingdon Outdoor Activities Centre respectively. The Council further agrees and confirms it will make no claim for compensation in respect of the land encompassed in the Ruislip Golf Course and the Uxbridge Golf Course for the period in which HS2 Ltd is carrying out any works to deliver the projects set out in clauses 11.1 11.2 in respect of either the Ruislip Golf Course and Uxbridge Golf Course, as relevant.

23. **Powers of the Secretary of State and HS2 Ltd**

23.1 For the avoidance of doubt nothing in this Agreement shall be taken to detract from the powers of the Secretary of State or HS2 Ltd other than powers conferred upon the Secretary of State or HS2 Ltd under the Act as expressly provided for in this Agreement.

24. **Rights of Third Parties Act 1999**

24.1 Only the Secretary of State, HS2 Ltd and the Council may enforce the terms of this Agreement and no other third party may enforce any such term by virtue of the Contracts (Rights of Third Parties) Act 1999.

25. **Dispute Resolution**

25.1 Save as otherwise expressly provided in this Agreement, any dispute or difference arising between the parties as to their respective rights duties and obligations under this Agreement or as to any matters arising out of or in connection with the subject matter of this Agreement (other than a dispute or difference with regard to the meaning or construction of this Agreement or a dispute or difference as to compensation which is referable to the Upper Tribunal) shall be referred to and determined by an independent person (acting as an expert) to be agreed between the parties or failing such agreement to be nominated by the President or Vice-President or other duly authorised officer of the Institution of Civil Engineers on the application of either party (after having given notice to the other).

25.2 Any dispute or difference arising between the parties as to the meaning or construction of this Agreement shall be referred to and determined by an independent solicitor or barrister of at least ten years standing acting as an expert and who is experienced in drafting, negotiating and advising upon agreements similar to this Agreement, such independent person to be agreed between the Parties or failing such agreement to be nominated by the President or Vice President or other duly qualified officer of the Law Society on the application of either party (after having given notice to the other).

25.3 Any expert appointed under clauses 25.1 and 25.2 will afford each of the parties an opportunity to make written representations to them and also an opportunity to make written counter-representations on any representation made to them by the other party but will not be in any way limited or fettered by such representations and counter-representations and will be entitled to rely on their own judgement and opinion.

25.4 If any expert appointed under clauses 25.1 and 25.2 dies or refuses to act or becomes incapable of acting or if the expert fails to publish a determination within 3 months of the date upon which the expert accepted the appointment either party may (after having given notice to the other) apply to either the President or Vice-President or other duly authorised officer of the Institution of Civil Engineers or the President or Vice President or other duly qualified officer of the Law Society (as the case may be) to discharge such an expert and appoint another expert in their place.

25.5 Notwithstanding any other provision of this Agreement the costs of the parties in connection with any expert determination under this Agreement shall be borne as the expert shall direct.

26. **Entire Agreement**

26.1 This Agreement constitutes the entire agreement between the parties in relation to its subject matter and supersedes the following:

26.1.1 any prior undertakings or assurances provided by the Secretary of State or HS2 Ltd to the Council contained within the Register of Undertakings and Assurances; and

26.1.2 any prior agreements and understandings

whether oral or written with respect to its subject matter.

26.2 For the avoidance of doubt this Agreement supersedes any assurances given to the Council including for the avoidance of doubt by way of the letters dated 10 June 2015, 15 June 2015, 23 September 2015, 15 January 2016, 25 January 2016 and 15 February 2016 from Roger Hargreaves to Fran Beasley (London Borough of Hillingdon) and the letter dated 15 July 2016 from Dave Buttery (DfT) to Fran Beasley.

26.3 In clause 26.1.1 the "*Register of Undertakings and Assurance*" means a register recording the binding commitments given by the Secretary of State during the passage of the Bill which are held by the Department of Transport and finalised at Royal Assent.

26.4 No variation of this Agreement shall be effective unless it is reduced to writing and is signed by or on behalf of a duly authorised representative of each of the parties.

27. **Jurisdiction**

27.1 This Agreement shall be governed by and construed in accordance with the law of England.

28. **Notices**

28.1 Any notice served under or in relation to this Agreement shall be in writing and shall refer to the relevant provision of this Agreement and shall be given, served or supplied by addressing or supplying it to the Secretary of State and HS2 Ltd or the Council as the case may be, and by sending it by:-

28.1.1 courier service or recorded delivery to the address of the Secretary of State or HS2 Ltd or the Council set out below or to such other addresses as the Secretary of State or HS2 Ltd or the Council may from time to time designate by written notice to the others; or

28.1.2 where agreed by the parties, by email sent to such email addresses as the Secretary of State or HS2 Ltd or the Council may from time to time designate by written notice to the other.

28.2 Council's address:

For the Attention of the Chief Executive
London Borough of Hillingdon
Civic Centre
High Street
Uxbridge
Middlesex
UB8 1UW

28.3 HS2 Ltd's address:

For the Attention of General Counsel
High Speed Two Limited
2 Snowhill

Queensway
Birmingham
England
B4 6GA

28.4 The Secretary of State 's address:-

For the Attention of General Counsel
Department for Transport
Great Minster House
33 Horseferry Road
London
SW1P 4DR

EXECUTED AS A DEED by the parties on the day and year first before written

THE CORPORATE SEAL of
THE SECRETARY OF STATE
hereunto affixed to this Deed
is authenticated by:

)
)
)
)



SEAL REF NO. DPT/8305

Authorised by the Secretary of State for Transport

Signed as a deed by STEVE ALLEN
for and on behalf of
HIGH SPEED TWO (HS2) LIMITED
acting by one director
in the presence of:

)
)
)
)

Signature of director



Witness Signature:

Witness Name:

Nicola Richardson

Witness Address:

2 SNOWHILL, BIRMINGHAM

EXECUTED as a DEED)
by affixing **THE COMMON SEAL OF**)
THE MAYOR AND BURGESSES OF)
THE LONDON BOROUGH OF HILLINGDON)
by Order)

Ray Puddifoot
Member of the Council:

Authorised Officer: *Rajesh Singh*



APPENDIX 1

PROWS

PROW	Map Reference	Diversion
U36, U37 & U38	U36 U37 U38 Diversion	<p><u>Stage 1</u></p> <p>1. Footpaths U36 & U37 remain open with manned crossing point(s) for haul road; 2. Temporary diversion of U38 within field boundary using the boundary edge of land acquired for sustainable placement 3. Deposit of sustainable placement materials east of U36;</p> <p><u>Stage 2</u></p> <p>4. Divert U36 along the routes of U37 and U39 5. Deposit of sustainable placement materials east of U37; 6. Re-soil area east of U37;</p> <p><u>Stage 3</u></p> <p>7. Re-instate the route of U38; 8. Re-instate the route of U36, remove haul road crossing U36; 9. Divert U37 along route of reinstated U36 and the route of U39; 10. Topsoil strip of remaining area west of reinstated route of U36; 11. Deposit of sustainable placement materials west of the reinstated route of U36; 12. Re-soil remaining area west of reinstated route of U36; 13. Re-instate route of U37, remove haul road crossing U37.</p>
U43	U43 U45 U46 Diversion	Will be closed for approximately 2 months and diverted along the route of U45, along the east of the River Pinn, to the adjacent footpath U46 (170m to south) during construction. Where this footpath is diverted along Breakspear Road South, a temporary footpath will be created along one side of the road.
U45	U43 U45 U46 Diversion	Will be temporarily closed and diverted along footpath U43 along Breakspear Road South then via a temporary footpath to a temporary footbridge over the River Pinn to join up with footpath U47 to the south of the NR Chiltern Main Line. A segregated walkway will be provided along Breakspear Road South along the route of the diversion.
U49	U49 U50 Diversion	The route of the footpath will be diverted as shown in (Diagram U49 U50 Diversion). This footpath will be segregated from the works by a temporary fence and from Harvil Road by existing hedgerow/fence. It is HS2 Ltd's intention so far as reasonably practicable to have a manned crossing points where required.
U50	U49 U50 Diversion	The route of the footpath diversion will be in line with (Diagram U49 U50 Diversion).
U51	U43 U45 U46 Diversion	- If required will be temporarily closed and diverted around the southern and western edges of the proposed habitat creation. HS2 Ltd will so far as reasonably practicable undertake the works for habitat creation to minimise impact on the footpath.

Lists the affected PROWs and the specific diversions affecting the PROWs and HS2 Ltd's proposals to mitigate the impact.

APPENDIX 2

Prow Drawings

U43 U45 U46 Diversion

GREATER LONDON LONDON BOROUGH OF HILLINGDON PLAN

SHEET No. 1-55

IN PARLIAMENT - SESSION 2013-14

(LONDON ROADS AND

WINDING RIGHTS ACT 1993)

Works No. 1651 (Canals)

Works No. 1652 (Canals)

Works No. 1653 (Canals)

Works No. 1654 (Canals)

Works No. 1655 (Canals)

Works No. 1656 (Canals)

Works No. 1657 (Canals)

Works No. 1658 (Canals)

Works No. 1659 (Canals)

Works No. 1660 (Canals)

Works No. 1661 (Canals)

Works No. 1662 (Canals)

Works No. 1663 (Canals)

Works No. 1664 (Canals)

Works No. 1665 (Canals)

Works No. 1666 (Canals)

Works No. 1667 (Canals)

Works No. 1668 (Canals)

Works No. 1669 (Canals)

Works No. 1670 (Canals)

Works No. 1671 (Canals)

Works No. 1672 (Canals)

Works No. 1673 (Canals)

Works No. 1674 (Canals)

Works No. 1675 (Canals)

Works No. 1676 (Canals)

Works No. 1677 (Canals)

Works No. 1678 (Canals)

Works No. 1679 (Canals)

Works No. 1680 (Canals)

Works No. 1681 (Canals)

Works No. 1682 (Canals)

Works No. 1683 (Canals)

Works No. 1684 (Canals)

Works No. 1685 (Canals)

Works No. 1686 (Canals)

Works No. 1687 (Canals)

Works No. 1688 (Canals)

Works No. 1689 (Canals)

Works No. 1690 (Canals)

Works No. 1691 (Canals)

Works No. 1692 (Canals)

Works No. 1693 (Canals)

Works No. 1694 (Canals)

Works No. 1695 (Canals)

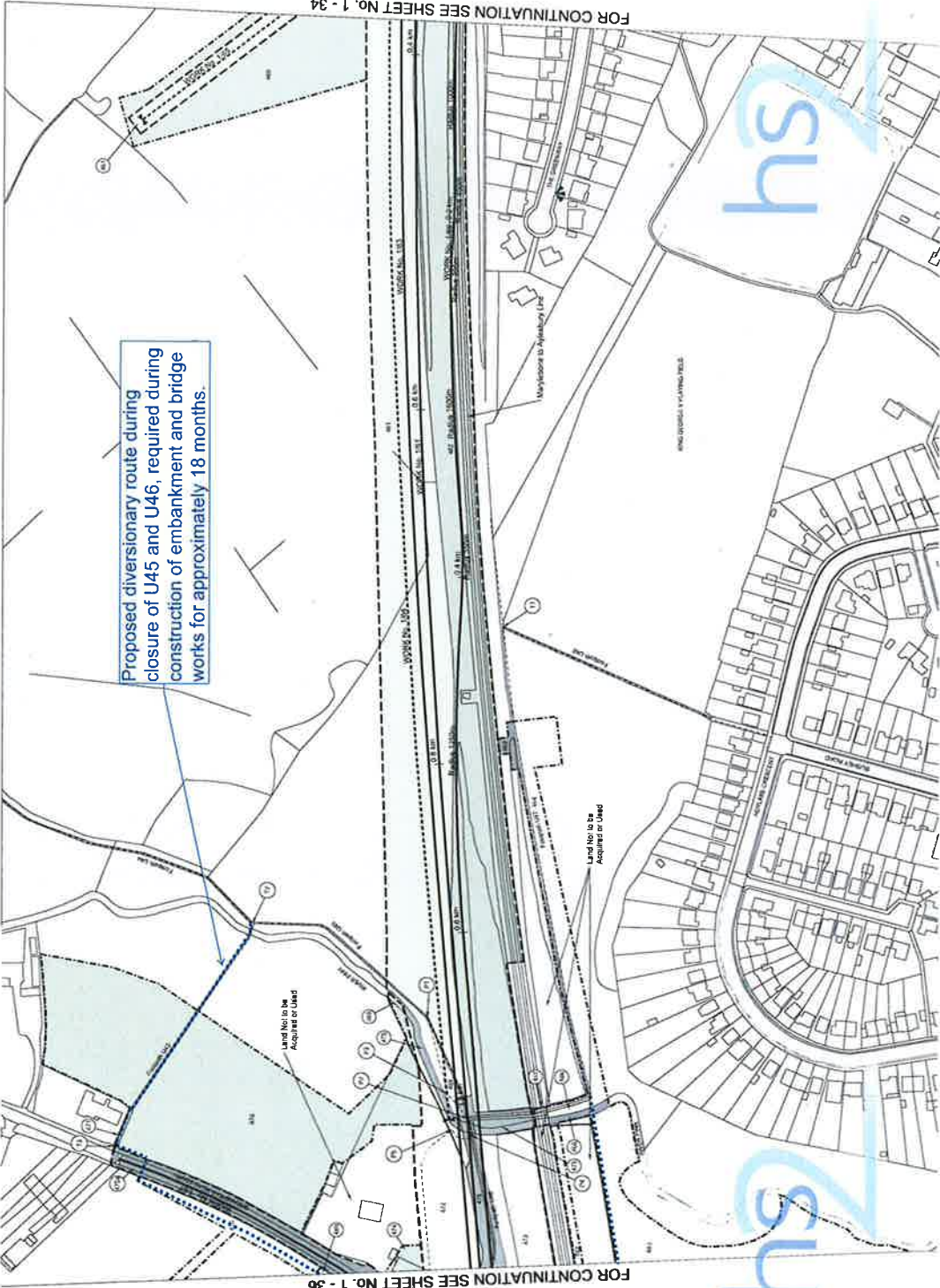
Works No. 1696 (Canals)

Works No. 1697 (Canals)

Works No. 1698 (Canals)

Works No. 1699 (Canals)

Works No. 1700 (Canals)



FOR CONTINUATION SEE SHEET No. 1 - 53

FOR CONTINUATION SEE SHEET No. 1 - 34

FOR CONTINUATION SEE SHEET No. 1 - 36

Proposed drawing title, sheet number, and date.

Proposed drawing title, sheet number, and date.

Scale 1:1250 at A1 size, 1:2500 at A3 size.

Drawing No. C221-MMD-HY-DPL-010-103500 Rev: HB01

GREATER LONDON LONDON BOROUGH OF HILLINGDON PLAN

SHEET No. 1-35

IN PARLIAMENT - SESSION 2013-14
HIGH SPEED RAIL
(LONDON - WEST MIDLANDS)

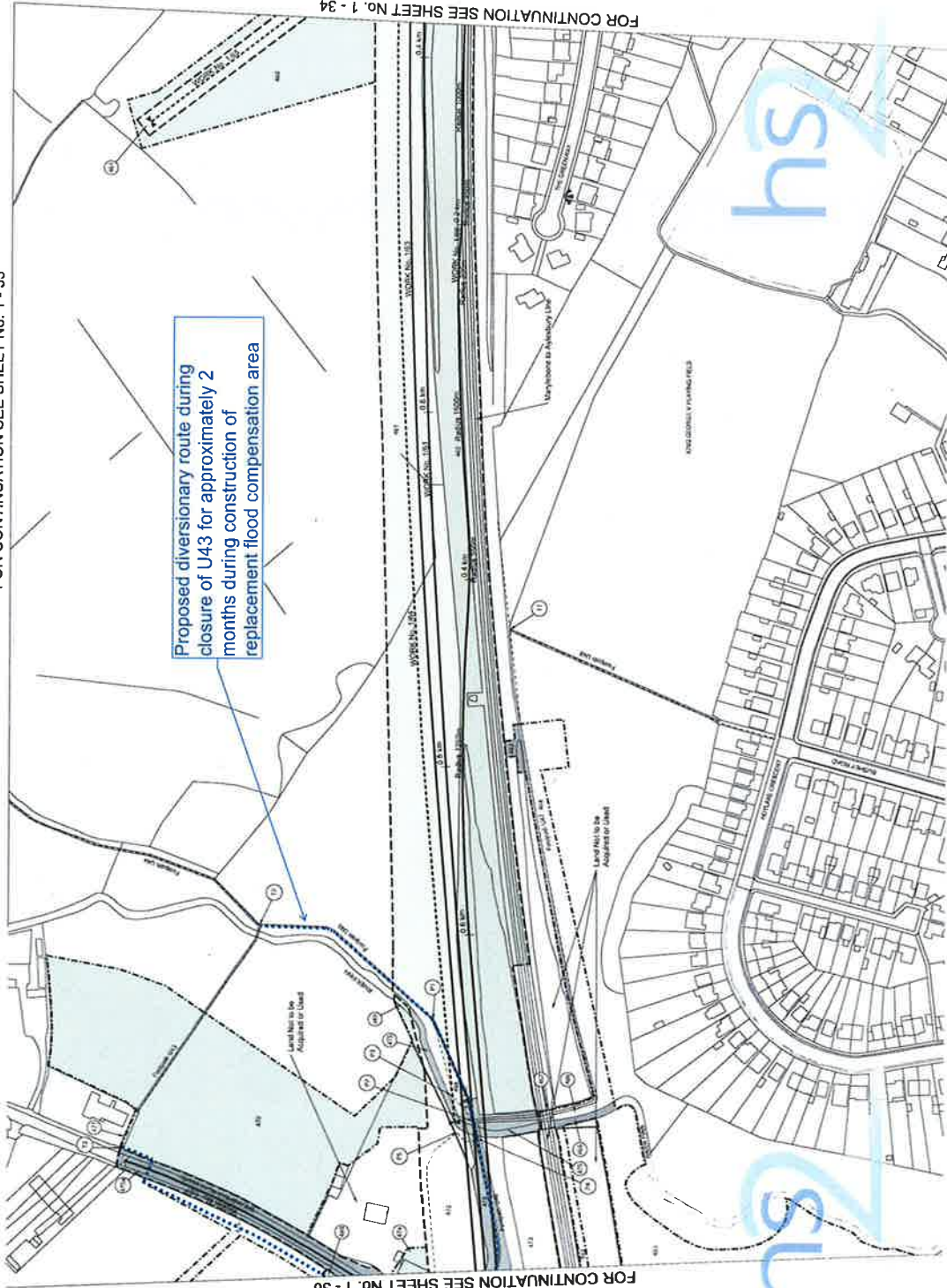
Work No. 183 (Use of Footways)
Work No. 184 (Watercourse)
Work No. 187 (Road)

For Section of Work No. 183 see Sheet No. 4-23
For Section of Work No. 183 see Sheet No. 4-24
For Section of Work No. 183 see Sheet No. 4-25
For Section of Work No. 184 see Sheet No. 4-26
For Section of Work No. 184 see Sheet No. 4-27
For Section of Work No. 184 see Sheet No. 4-28
For Section of Work No. 187 see Sheet No. 4-29

The area enclosed by any line of separation or by any line of the main edge of the boundary shall be deemed to be the area of the boundary.

This plan is based on information which is provided by the applicant and is subject to the approval of the Local Planning Authority. It is not to be construed as a guarantee of accuracy. The Local Planning Authority is not responsible for any errors or omissions. The Local Planning Authority is not responsible for any errors or omissions. The Local Planning Authority is not responsible for any errors or omissions.

FOR CONTINUATION SEE SHEET No. 1 - 53



Approved Bill of Materials (BOM) No. 183
and 184 (BOM 183) - Hillingdon & B20

scale 1:1250 at A1 size, 1:2500 at A3 size



metres 50 100 150

GREATER LONDON LONDON BOROUGH OF HILLINGDON PLAN

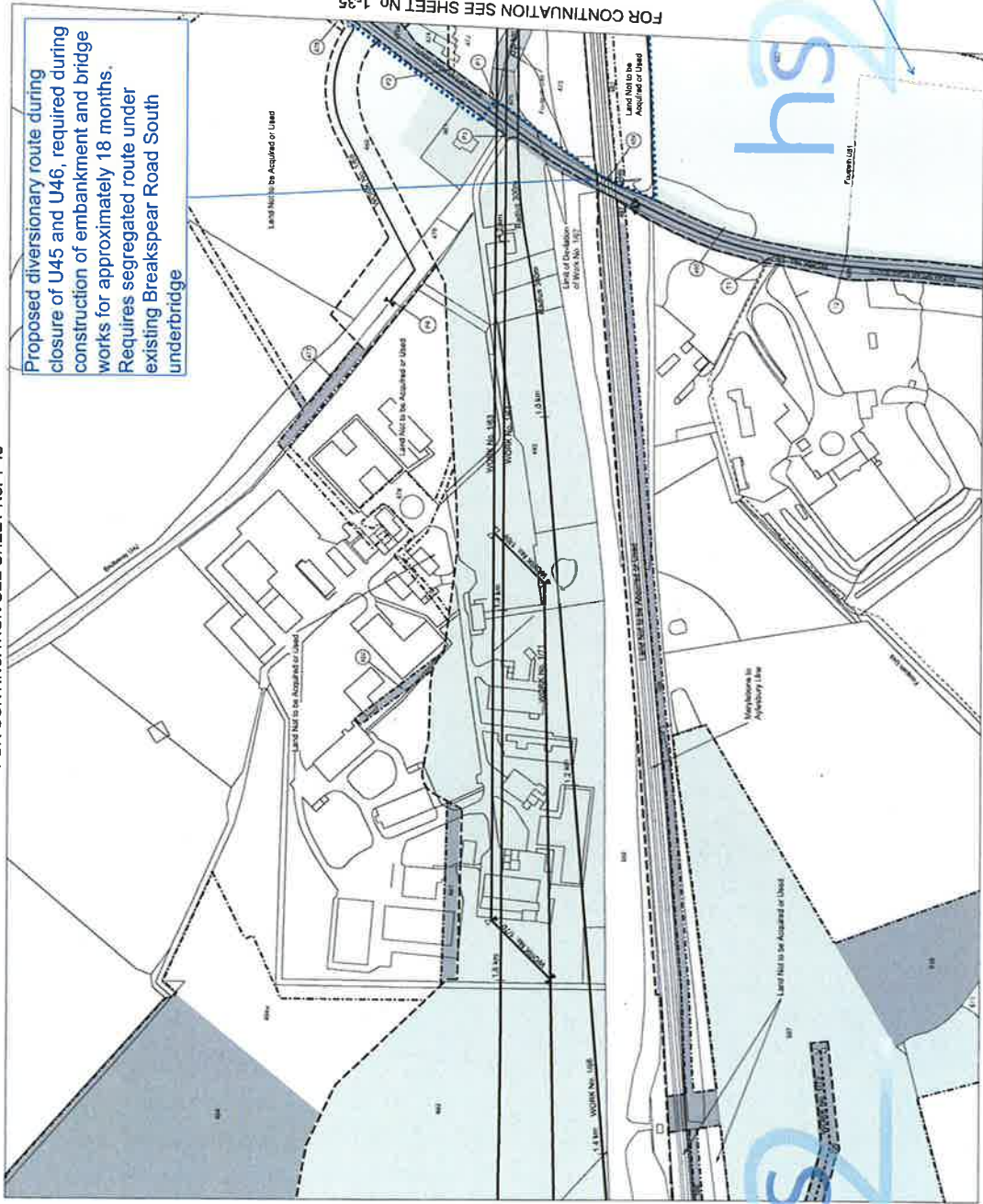
SHEET No. 1-36

IN PARLIAMENT - SESSION 2013-14
HIGH SPEED RAIL
(LONDON SOUTHWARDS)
Works Nos. 1463, 1464, 1470, 1471 (Clampney area)
Work No. 1472 (Barnet Road)
Work No. 1473 (Gas Main Diversion)

For Section of Work No. 1463 see Sheet No. 4-74
For Section of Work No. 1464 see Sheet No. 4-75
For Section of Work No. 1470 see Sheet No. 4-76
For Section of Work No. 1471 see Sheet No. 4-77
For Section of Work No. 1472 see Sheet No. 4-78
For Section of Work No. 1473 see Sheet No. 4-79

The area enclosed by any limit of deviation or by any
to the limit of the area of the work and by any
The route is based upon information which should with the
provision of adequate survey on behalf of the contractor.
Unauthorised reproduction, copying or disclosure of
contract documents is prohibited under the provisions of
Contract Administration (1999) 1933.

FOR CONTINUATION SEE SHEET No. 1-48



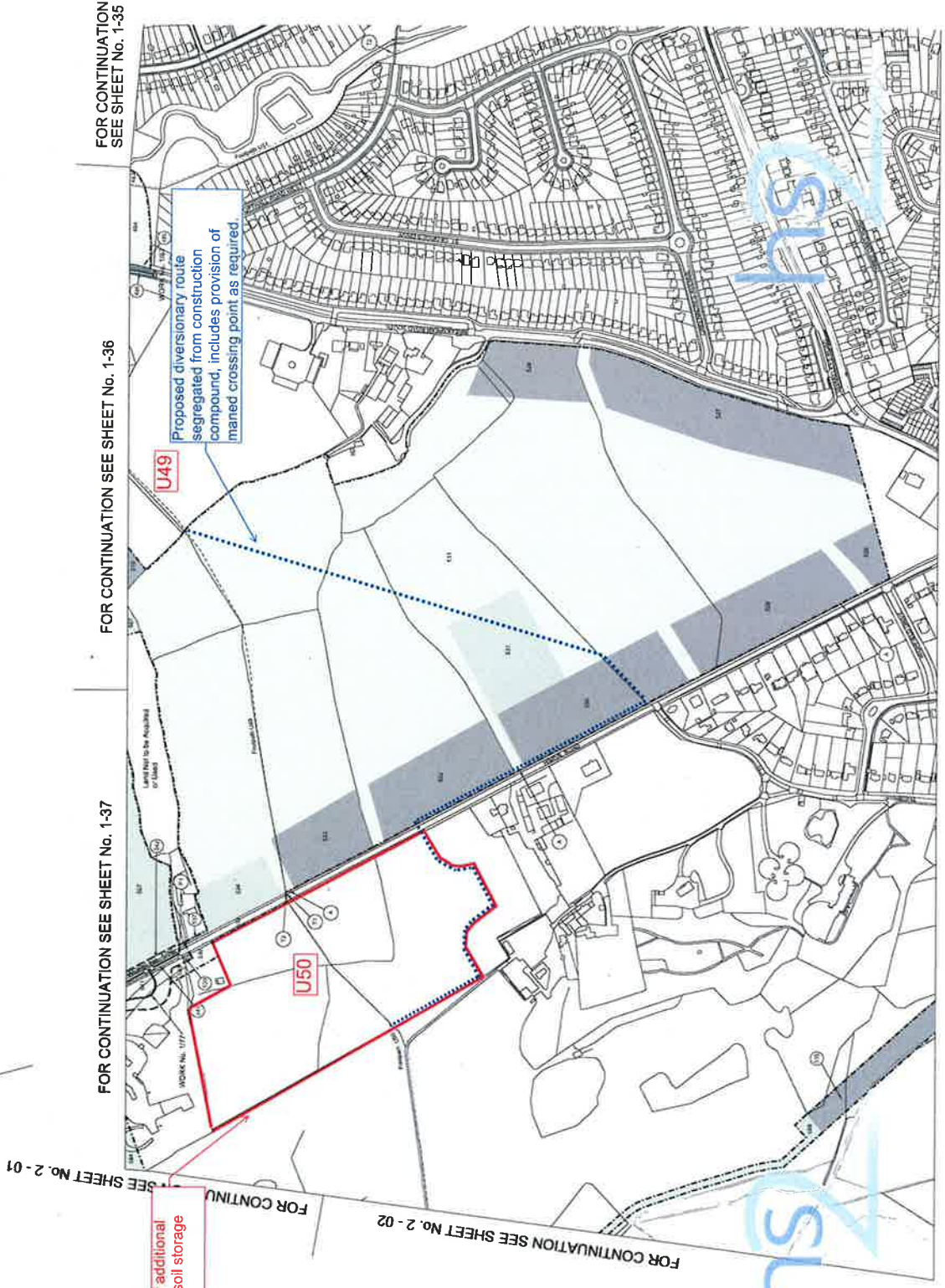
Proposed to phase construction activities adjacent to U51 (ecological habitat creation/enhancement) to maintain a route through effected land.



U49 U50 Diversion

SHEET No. 1-49
 IN PARLIAMENT - SESSION 2013-14
 HIGH SPEED RAIL
 (LONDON - WEST MIDLANDS)
 Works Nos. 167, 176, 177 (Roads)
 For Section of Work No. 167 see Sheet No. 4-75
 For Section of Work No. 176 see Sheet No. 4-81
 For Section of Work No. 177 see Sheet No. 4-81
 The area enclosed by any line of enclosure or by any line of road to be acquired or used as an airway or for the main edge of the proposed route shall be the property of the Crown and shall be subject to the provisions of the Highways Act 1980 and the Highways (Acquisition of Land) Act 1982.

GREATER LONDON LONDON BOROUGH OF HILLINGDON PLAN



Indicative boundary of additional temporary topsoil/subsoil storage area

Proposed diversionary route segregated from construction compound, includes provision of named crossing point as required.

FOR CONTINUATION SEE SHEET No. 1-35

FOR CONTINUATION SEE SHEET No. 1-36

FOR CONTINUATION SEE SHEET No. 1-37

FOR CONTINUATION SEE SHEET No. 2-01

FOR CONTINUATION SEE SHEET No. 2-02

FOR CONTINUATION SEE SHEET No. 1-50



scale 1:2500 at A1 size, 1:5000 at A3 size

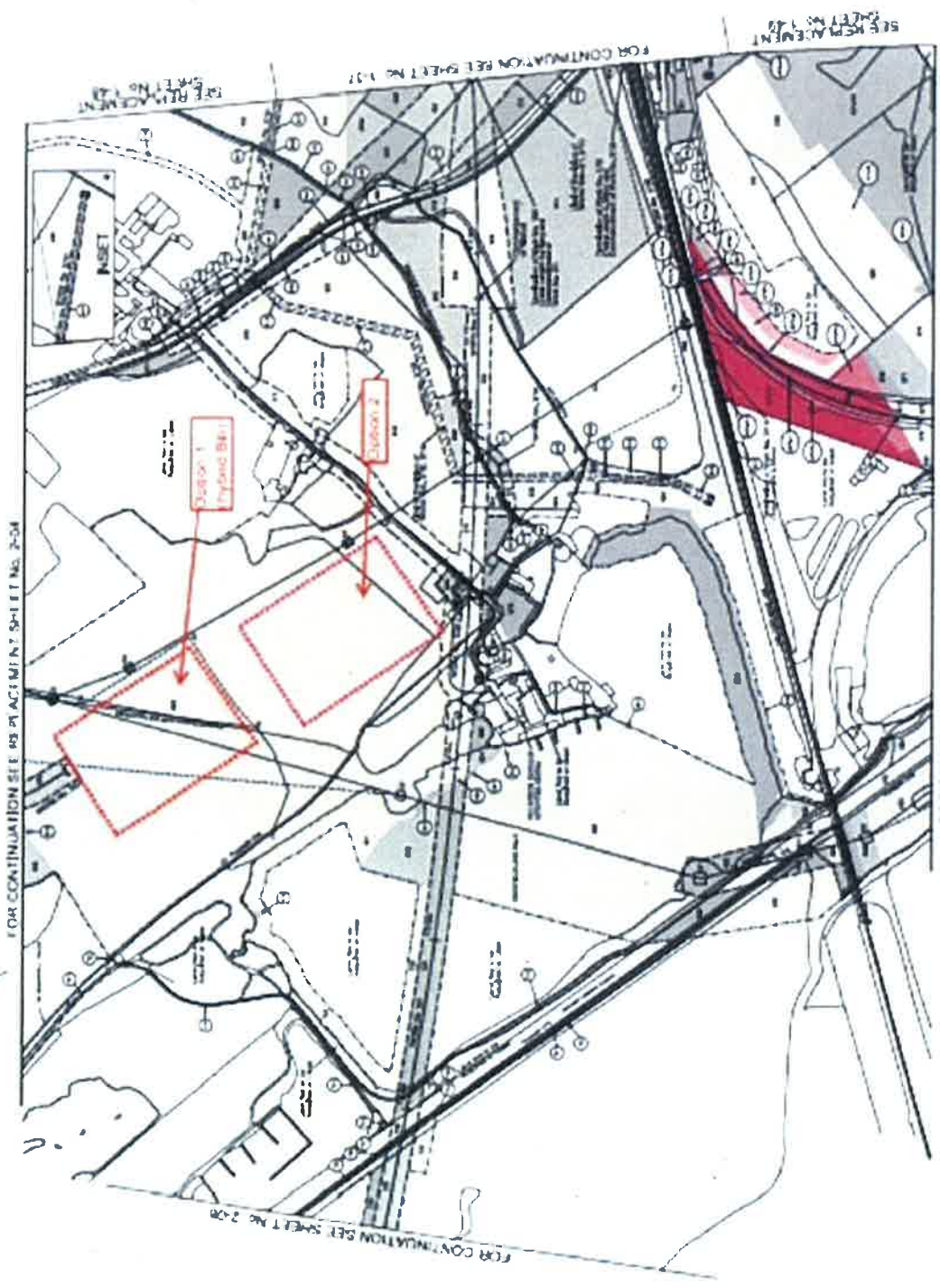
APPENDIX 3

GSP Option 2

FIGURE 1

GREAT LONDON LONDON BOROUGH OF HILLINGDON PLAN

<p>1. THE PLAN IS A PRELIMINARY DESIGN AND IS NOT TO BE USED FOR CONSTRUCTION.</p> <p>2. THE PLAN IS SUBJECT TO THE APPROVAL OF THE LOCAL AUTHORITY AND THE METROPOLITAN WATERWORKS BOARD.</p> <p>3. THE PLAN IS SUBJECT TO THE APPROVAL OF THE METROPOLITAN WATERWORKS BOARD.</p> <p>4. THE PLAN IS SUBJECT TO THE APPROVAL OF THE METROPOLITAN WATERWORKS BOARD.</p> <p>5. THE PLAN IS SUBJECT TO THE APPROVAL OF THE METROPOLITAN WATERWORKS BOARD.</p>
<p>6. THE PLAN IS SUBJECT TO THE APPROVAL OF THE METROPOLITAN WATERWORKS BOARD.</p> <p>7. THE PLAN IS SUBJECT TO THE APPROVAL OF THE METROPOLITAN WATERWORKS BOARD.</p> <p>8. THE PLAN IS SUBJECT TO THE APPROVAL OF THE METROPOLITAN WATERWORKS BOARD.</p> <p>9. THE PLAN IS SUBJECT TO THE APPROVAL OF THE METROPOLITAN WATERWORKS BOARD.</p> <p>10. THE PLAN IS SUBJECT TO THE APPROVAL OF THE METROPOLITAN WATERWORKS BOARD.</p>
<p>11. THE PLAN IS SUBJECT TO THE APPROVAL OF THE METROPOLITAN WATERWORKS BOARD.</p> <p>12. THE PLAN IS SUBJECT TO THE APPROVAL OF THE METROPOLITAN WATERWORKS BOARD.</p> <p>13. THE PLAN IS SUBJECT TO THE APPROVAL OF THE METROPOLITAN WATERWORKS BOARD.</p> <p>14. THE PLAN IS SUBJECT TO THE APPROVAL OF THE METROPOLITAN WATERWORKS BOARD.</p> <p>15. THE PLAN IS SUBJECT TO THE APPROVAL OF THE METROPOLITAN WATERWORKS BOARD.</p>
<p>16. THE PLAN IS SUBJECT TO THE APPROVAL OF THE METROPOLITAN WATERWORKS BOARD.</p> <p>17. THE PLAN IS SUBJECT TO THE APPROVAL OF THE METROPOLITAN WATERWORKS BOARD.</p> <p>18. THE PLAN IS SUBJECT TO THE APPROVAL OF THE METROPOLITAN WATERWORKS BOARD.</p> <p>19. THE PLAN IS SUBJECT TO THE APPROVAL OF THE METROPOLITAN WATERWORKS BOARD.</p> <p>20. THE PLAN IS SUBJECT TO THE APPROVAL OF THE METROPOLITAN WATERWORKS BOARD.</p>



FOR CONTINUATION SEE REPLACEMENT SHEET No. 2-02

FOR CONTINUATION SEE SHEET No. 1-01

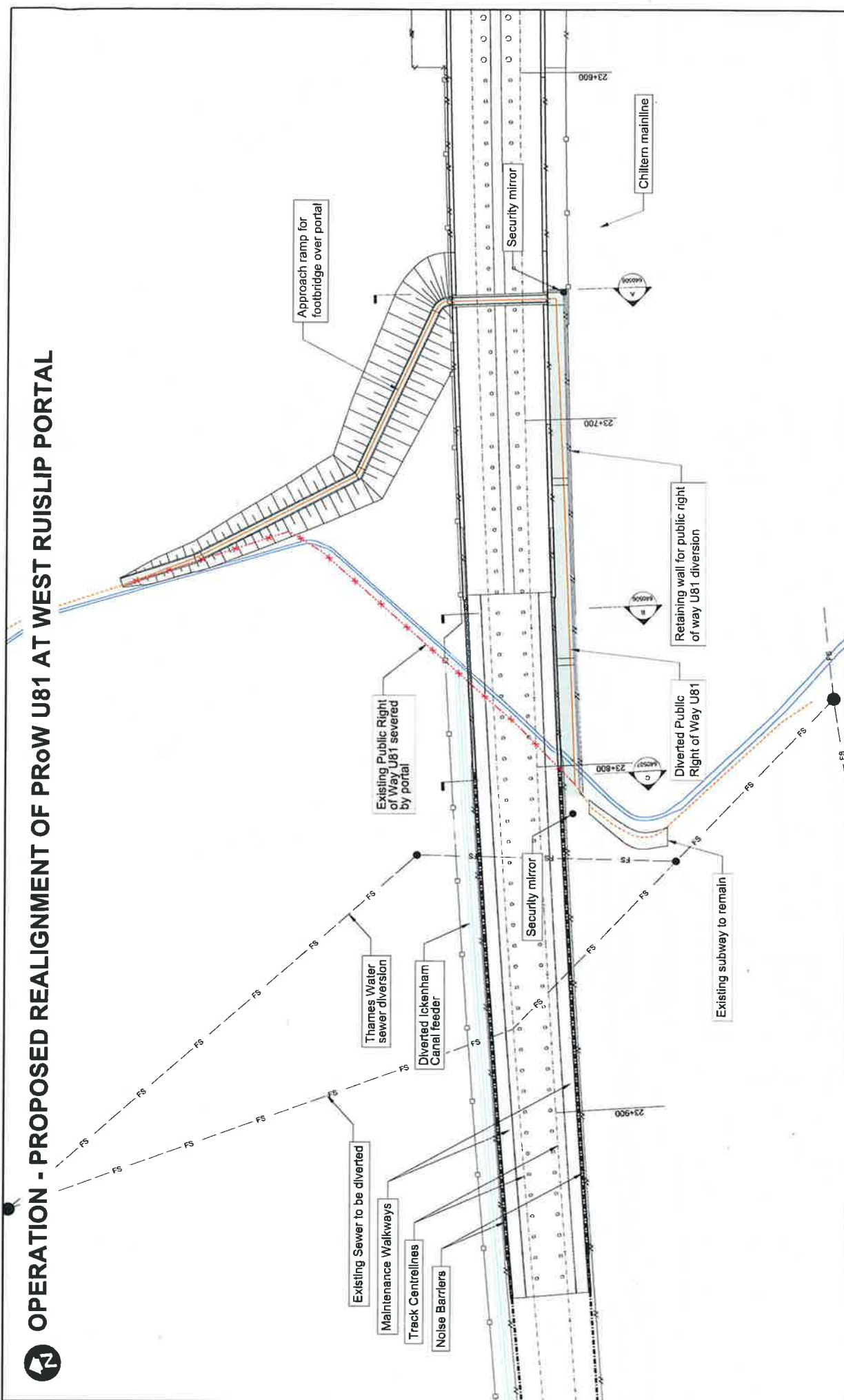
FOR CONTINUATION SEE SHEET No. 2-01

APPENDIX 4

PROW U81

Drawing No: C221-MMD-CV-DPL-010-640501-PET000000

OPERATION - PROPOSED REALIGNMENT OF PROW U81 AT WEST RUISLIP PORTAL

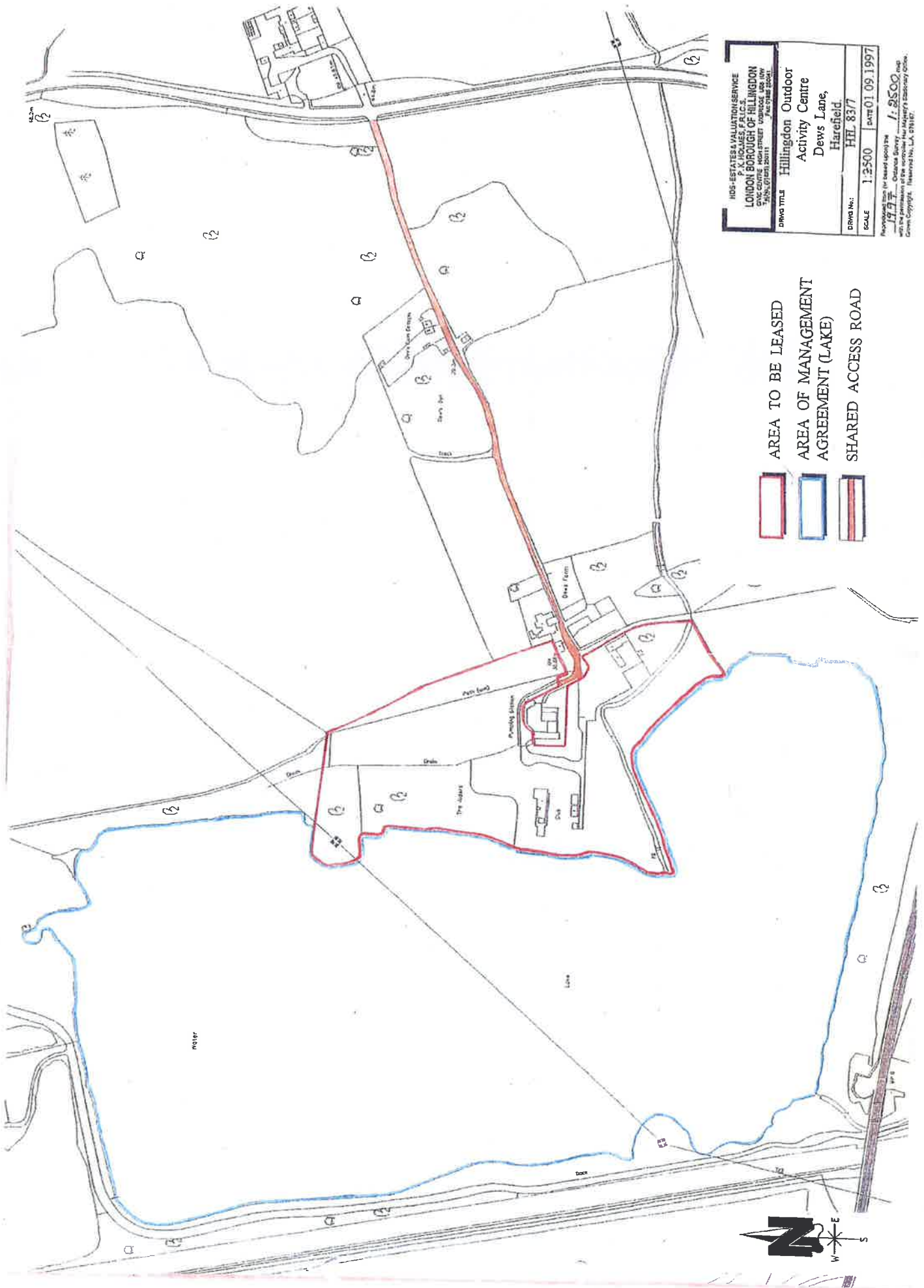


Registered Engineer Registration No. 100000000 Civil London, UK	London Metropolitan DESIGN-FOR-PETITION	Project/Contract London Metropolitan Area Design
	Drawing Title Ruislip & Ickenham West Ruislip Portal & PROW U81 Location Plan	Decline/revision Drawn: RK Checked: Approved Date: 01/10/2015 Scale: AS SHOWN Size: A3
Client/Originator Mott MacDonald	Drawing No. C221-MMD-CV-PL-010-640501-PET000000	Rev. P00.1

1. This drawing only shows the civil and structural works relevant to the West Ruislip Portal.
 HS2 remains the responsibility for any other infrastructure within the limits of the contract. It is the responsibility of the contractor to ensure that all other infrastructure is protected or diverted as appropriate.
 HS2 is not responsible for any other infrastructure within the limits of the contract. It is the responsibility of the contractor to ensure that all other infrastructure is protected or diverted as appropriate.
 HS2 is not responsible for any other infrastructure within the limits of the contract. It is the responsibility of the contractor to ensure that all other infrastructure is protected or diverted as appropriate.

APPENDIX 5

HOAC Land



- AREA TO BE LEASED
- AREA OF MANAGEMENT AGREEMENT (LAKE)
- SHARED ACCESS ROAD

IND-ESTATES & VALUATION SERVICE P. X. HOLMES, F.R.I.C.S. LONDON BOROUGH OF HILLINGDON 1977 245-5, GERRARD ROAD, HILLINGDON, MIDDLESEX, U.K. (near Hillingdon Station)	
DRAWN TITLE	Hillingdon Outdoor Activity Centre Dews Lane, Harefield
DRWG No:	HL 83/7
SCALE	1:2500 DATE 01.09.1997

Photocopy made for based upon the original drawing of 1:2500 scale with the permission of the Hillingdon Urban Council. Crown Copyright. Information No. LA 578/97.

APPENDIX 6

Golf Course Designs

Gaunt Golf Design Report 5 May 2015

**DESIGN REPORT ON THE IMPACT OF HS2 RAILWAY LINE
UPON THE GOLF COURSE AND PRACTICE FACILITIES**

AT

RUISLIP GOLF COURSE, UXBRIDGE, LONDON BOROUGH OF HILLINGDON



prepared for

High Speed 2 Ltd

by

JONATHAN CHARLES GAUNT, BA (Hons), Dip LA (Leeds), EIGCA

5th May 2015

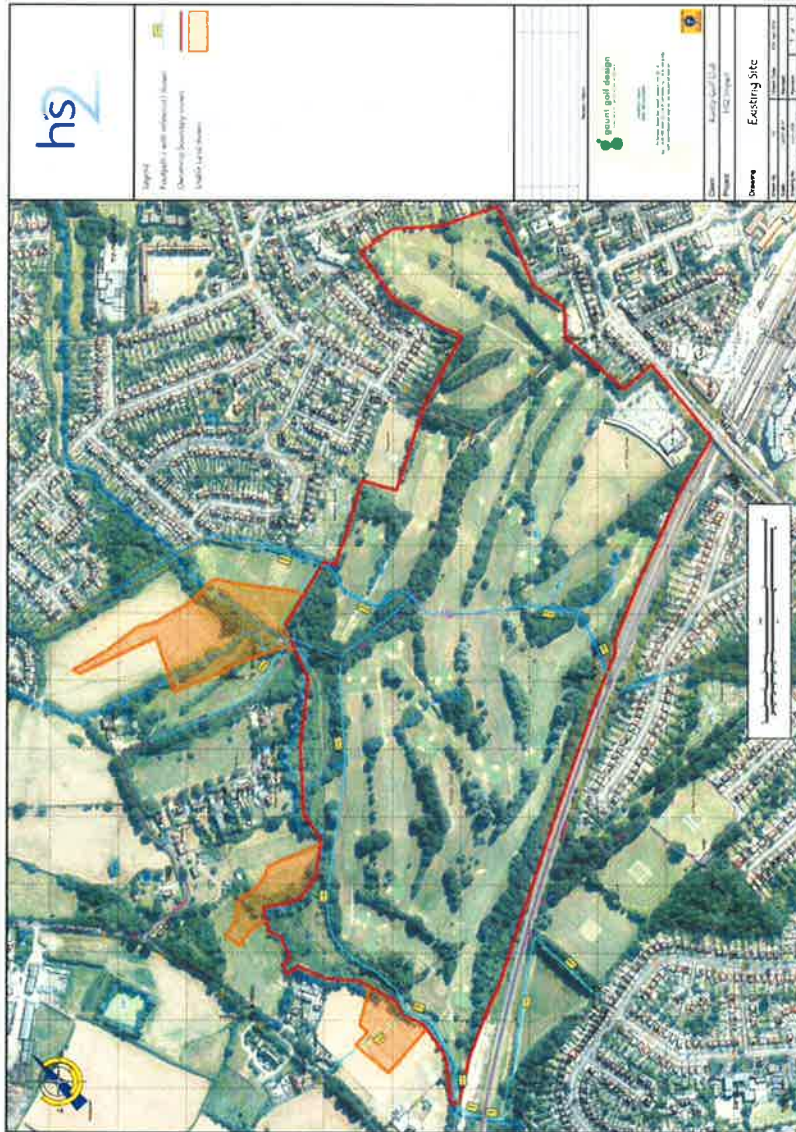
BRIEF	PAGE
A. Background to the report.	3
B. Impact on the golf course of the HS2 railway line.	6
C. Set out the design rationale and assumptions for each of the four options.	8
D. The relevant benefits of each option.	18
E. Advise how any difference between the railway construction boundary and the railway operational boundary can be used to optimal effect in the final configuration of the golf course once the railway works are complete.	22
F. Advise a potential timeline for each of the four options that will enable on-going availability of all or part of the golf course through the HS2 construction period.	23
G. Advise whether and how far these considerations improve any or all of the four options in fully or partially achieving paragraph 5.4.23 from the ES CFA6.	25
Appendix 1 – Illustrative budget costings.	27-30

A. BACKGROUND TO THE REPORT

1. This Design Report has been prepared in relation to the proposed High Speed Two Railway Line, which is proposed to be built through parts of the southern section of Ruislip Golf Course. The report will assess the impact on the golf course during the construction and during the operation of the of the railway line.
2. In this report we make specific reference to paragraph 5.4.23 in the CFA6 in the Environmental Statement, which identifies the requirement to enable the golf course to continue to operate as an eighteen hole golf course throughout the construction phase and then a means by which it could operate as an eighteen hole competition course throughout the operational phase of the Proposed Scheme.
3. To assist in assessing the impact of the Proposed Scheme on the golf course reports, documents and scaled plans/drawings have been provided by HS2 Ltd and by Hillingdon Council – as follows:
 - File Note from Hillingdon Council dated 03.10.14 (see Appendix 2) – which makes reference to the provision of the following information: Golf Course Scorecard; Boundary Ownership Plans; Drainage & Services Plans; Public Footpaths and Public Rights of way Plans and historical documentation – Deeds.
4. I attended a site inspection on behalf of HS2 Ltd at Ruislip Golf Course (on Wednesday 8th October 2014) with four representatives of Hillingdon Council: Paul Richards – Green Spaces, Sport and Leisure Senior Manager, Residents Services, Hillingdon Council; Ian Thynne – Principal Sustainability Officer - Hillingdon Council; Jales Tippell – Hillingdon Council and Paul Glozier, the golf professional. On the day I had no contact with any golf club members or officials of Ruislip GC, or anyone not employed by Hillingdon Council.
5. On this visit I walked the entire golf course and undertook a photographic record of all aspects of the golf course facilities, including, in particular, the driving range and holes directly affected by the proposed HS2 railway line.
6. Completely separate and unrelated to this work for HS2 Ltd, I had previously visited Ruislip Golf Course in 2013, whilst undertaking a feasibility study relating to all the Council-owned golf courses in the borough for Hillingdon Council, including Haste Hill, **Uxbridge and Stockley Pines GC's**.

7. We have used this survey information to create a base plan (along with a Google Aerial photo extract) which we have developed to show industry-accepted safety margins throughout the golf course site – see plan overleaf. We have off-set the safety margins from the proposed railway construction boundary, to ensure that operatives working on the site will be safe at all times whilst golf is being played on the Ruislip Golf Course.
8. We have produced four (4 no.) design options illustrating how the golf course and practice facilities could be re-configured/re-designed to provide Hillingdon Council with an operational golf facility.
9. To accompany these design options we have also produced indicative budget costings to advise upon the likely (re)development costs of each new course layout.
10. I am now providing my professional opinion, as a qualified Golf Course Architect (and Landscape architect), as to my findings and recommendations.

RUISLIP GOLF COURSE – EXISTING SITE PLAN



B. Impact on the golf course of the HS2 Proposed Scheme.

Existing course length = 5571 yards, par 69

The direct impact of the Proposed Scheme, as set out in the Hybrid Bill plans, is limited to the southern perimeter of the existing golf course – see plan overleaf. Notably, the practice nets, the putting green, holes #1 (tee and fairway), #2 (tee, fairway and green) and #3 (tee) are affected by the railway line routing, whereas, holes #15, #17, #18 and the driving range are impacted by the works to the Thames Water Utility and the ecological mitigation land.

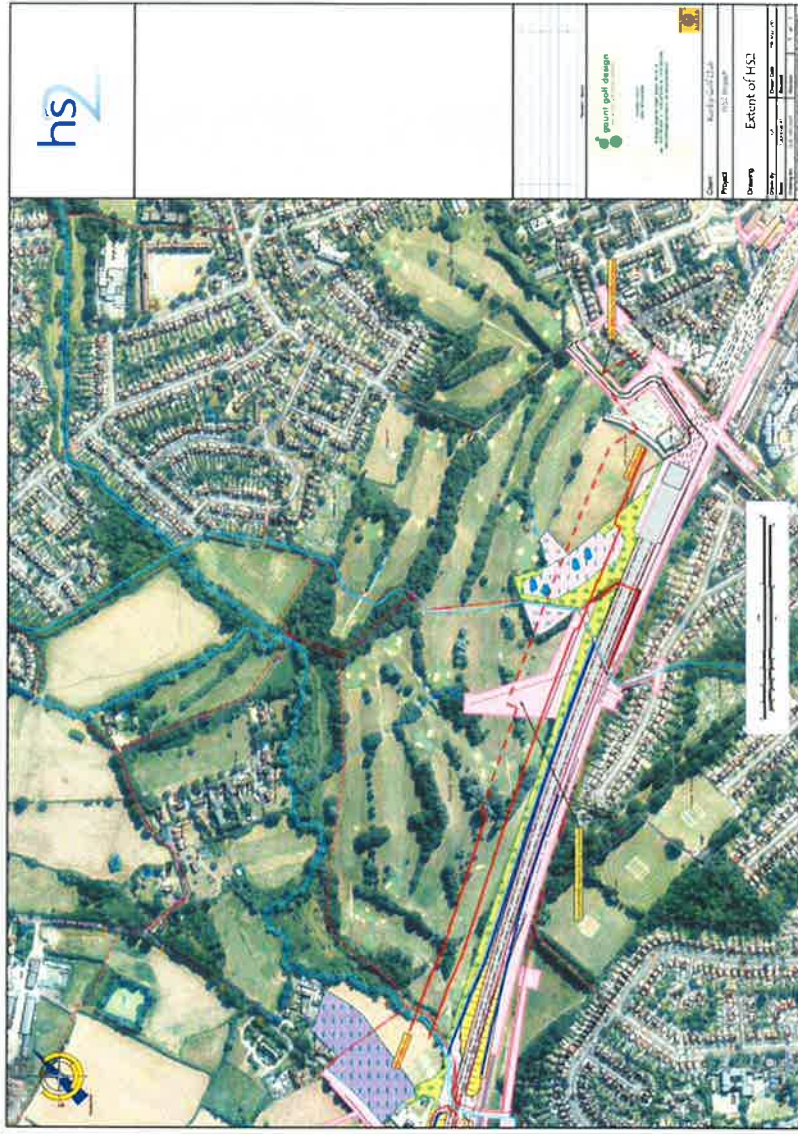
When taking into account the requirement to apply “industry-accepted” safety margins to the HS2 proposed construction boundary, the direct impact on the golf course increases significantly. For more than 20 years a safety margin of 60 metres has been referred to and applied to new golf course designs and layouts by members of the European Institute of Golf Course Architects and other golf course architects.

The 60 metre safety margin measurement is not a planning requirement, but it is widely recognised by local authorities. Hillingdon Council Green Spaces is aware of this measurement.

When the 60 metre safety margin is applied (measured from the proposed railway construction boundary – not from the centre line of the proposed railway line), more golf holes are affected – notably, hole #1 (green), hole #14 (green) and #15 (tee).

This is a major impact to an 18-hole golf course, especially when the course is located, as it is at Ruislip, on a site with limited spare/peripheral land, and with footpaths/bridleways criss-crossing it. There is little or no space to re-align/re-configure the affected holes and driving range. When one hole is re-aligned, it has a “domino-effect” and directly impacts on other holes.

RUISLIP GOLF COURSE – EXISTING SITE PLAN WITH HS2 PROPOSED SCHEME SUPERIMPOSED UPON IT



C. Set out the design rationale and assumptions for each of the four options.

We have prepared four (4 no.) possible design options to re-align/re-configure the golf course and facilities at Ruislip Golf Course to mitigate the possible impact of the HS2 railway line.

We have aimed, with our designs, to provide a replacement golf facility that is equivalent to what already exists. However, it must be noted that, due to the reduction in land availability – to accommodate the Proposed Scheme - it will not be possible to create a new 18-hole golf course layout of the same length and difficulty as the existing/current course.

We have also aimed to retain as much as possible of the original character and challenge of the existing course, however, it must be noted that when introducing new features (greens, tees, bunkers, hazards, etc.) to an existing course it is virtually impossible, in terms of specification and construction standard, to match the new to the existing. The original course was built in 1922 and in this respect, even though the design of the golf courses was similar, they were built very differently and, in many cases, to a lower standard than today. Also, courses of this era were built for fewer golfers to play on them.

The designs we have prepared take into account the need to construct the new features using the latest construction methods and highest specifications to ensure they continue to be operational, playable and maintainable for another 100 years.

In relation to paragraph 5.4.23 in the Environmental Statement CFA6, it is not possible to maintain an 18-hole full-length course during the course redevelopment or during the railway line construction.

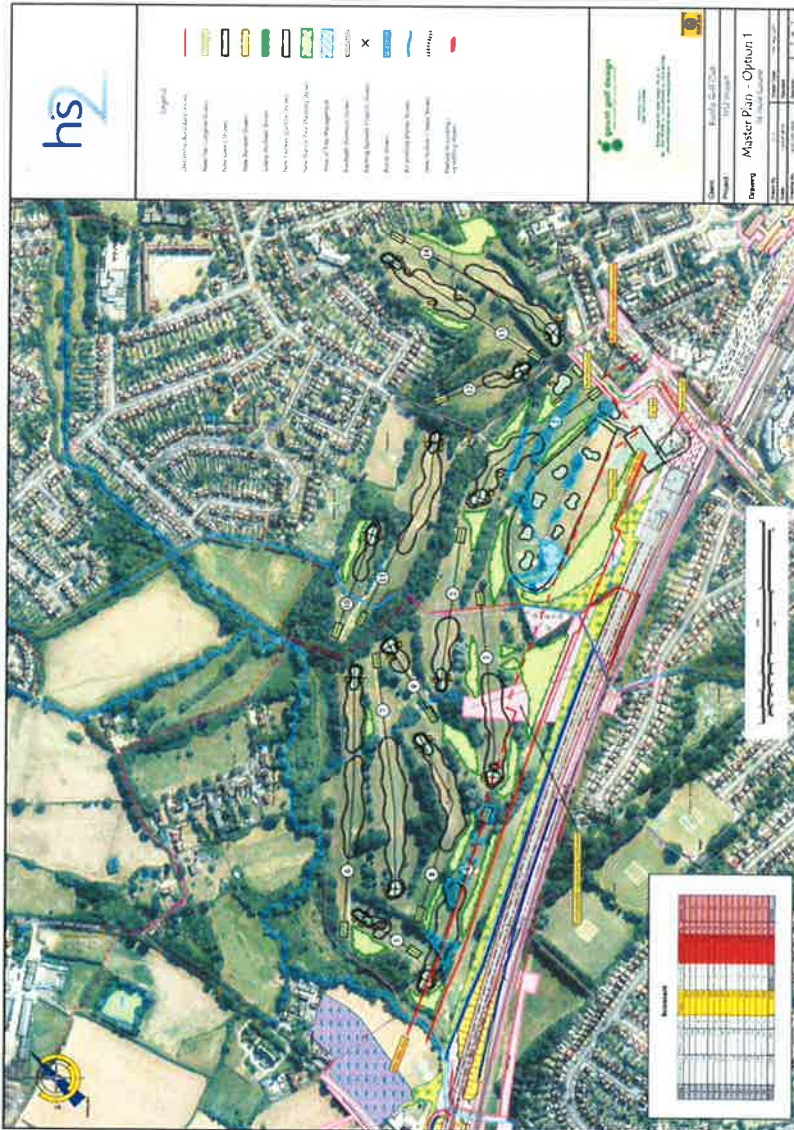
The land identified on the HS2 plans CT-06-018 and CT-05-018 (Construction Phase) identify the full impact of the Proposed Scheme both during and post construction. The **Thames Water Utility works ("Works 1/65")** are temporary – and are scheduled to be undertaken between November 2016 and May 2017. Golf holes #1 and #15 would be directly impacted during this period and would need to be shortened considerably.

What we have done is provide four possible design options, which can be summarised as follows:

- Option 1 – 14 hole course layout;
- Option 2 – 18-hole course layout;
- Option 3 – 9-hole course layout with 6-hole academy course;
- Option 4 – 9-hole course layout with 9-hole academy course.

The four options are as follows, overleaf:

Option 1 - 14-hole course - course length - 3661 yards, par 51 (1910 yards shorter and 18 shots fewer to par)



In this option we have designed a 14-hole golf course layout which would be similar, in many respects, to the existing 18-hole course, except shorter.

Re-aligned driving range tees and outfield, orientated north-west, played onto the existing 15th and 17th fairways.

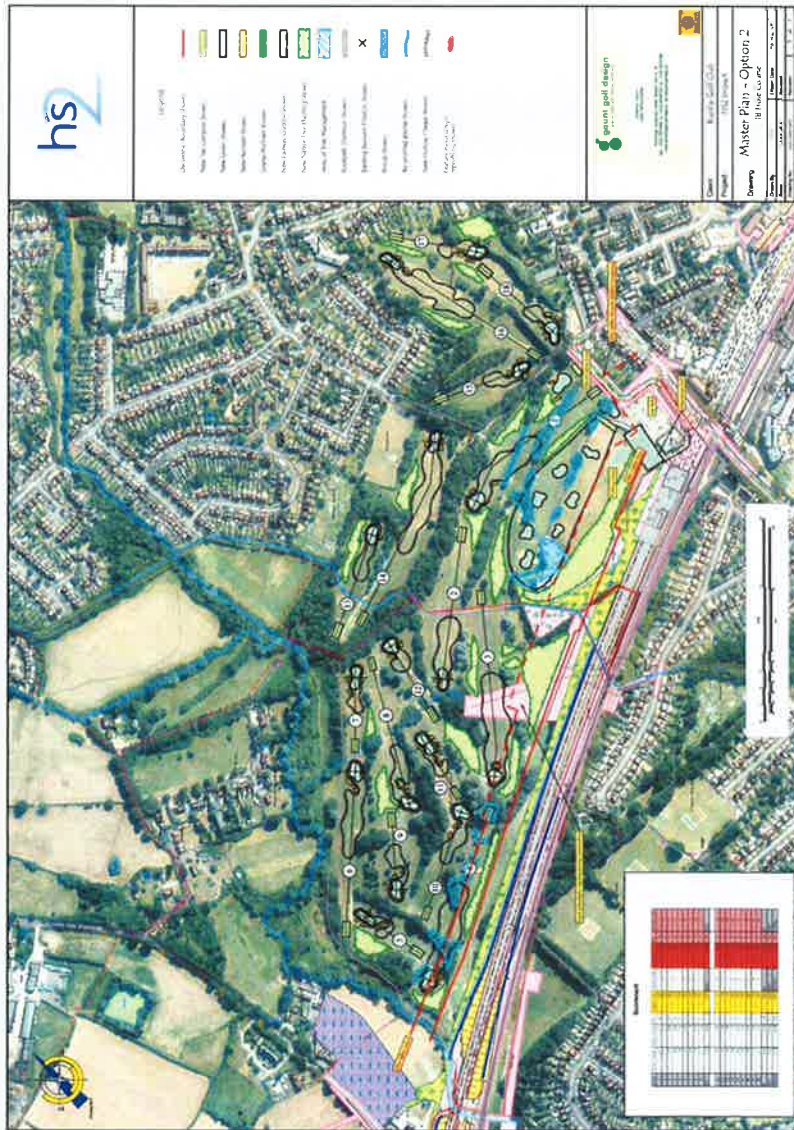
- Re-aligned holes #1, #2, #3 and #4;
- Shortened hole #5 (existing hole #3);
- Re-numbered hole #4 as new hole #6;
- Re-numbered hole #12 as new hole #7;
- Re-numbered hole #13 as new hole #8;
- Re-numbered hole #11 as new hole #9;
- Re-numbered hole #5 as new hole #10;
- Re-numbered hole #6 as new hole #11;
- Re-numbered hole #7 as new hole #12;
- Re-numbered hole #8 as new hole #13;
- Re-numbered hole #9 as new hole #14;

Other facilities:

- New putting green;
- New short game practice area/zone;
- Adventure Golf

Illustrative development budget cost = £1,903,000 (see Appendix 1 for full details)

Option 2 - 18-hole course - course length - 3584 yards, par 61 (1987 yards shorter and 8 shots fewer to par)



In this option we have designed an 18-hole golf course layout which would be significantly different to the existing 18-hole course, because it will be much shorter, with many short (par-3) holes.

Re-aligned driving range tees and outfield, orientated north-west, played onto the existing 15th and 17th fairways.

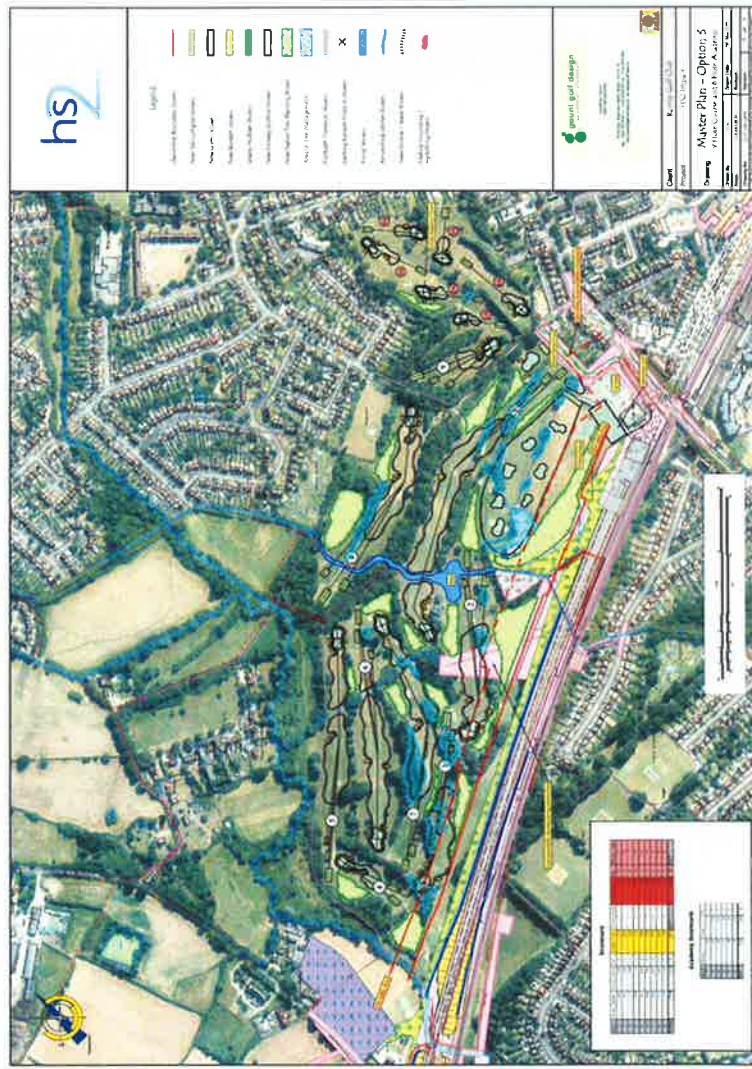
- Re-aligned holes #1, #2, #3 and #4;
- Shortened hole #5 (existing hole #3);
- Shortened hole #6 (existing hole #4);
- Shortened hole #7 (existing hole #4);
- Shortened hole #8 (existing hole #12);
- Shortened hole #9 (existing hole #12);
- Shortened hole #10 (existing hole #13);
- Shortened hole #11 (existing hole #13);
- Re-numbered hole #12 (existing hole #11);
- Re-numbered hole #13 (existing hole #5);
- Re-numbered hole #14 (existing hole #6);
- Re-numbered hole #15 (existing hole #7);
- Re-numbered hole #16 (existing hole #8);
- Shortened hole #17 (existing hole #9);
- Shortened hole #18 (existing hole #9);

Other facilities:

- New putting green;
- New short game practice area/zone;
- Adventure Golf

Illustrative development budget cost = £2,238,500 (see Appendix 1 for full details)

Option 3 - 9-hole course and 6-hole academy course - course length - 3029 yards, par 35 (9 holes) (played twice it is 6058 yards, par 70 - 487 yards longer and 1 shot greater to par) – Academy course – 581 yards, par 18 (6 holes)



In this option we have designed a 9-hole golf course layout which would be of “competition” standard and would be played twice (2x) to make an 18-hole course layout. The 6-hole academy course would be a “Par-3” course and would be sufficiently challenging to attract not just beginners and apprentice golfers, but also intermediate and more experienced golfers.

Re-aligned driving range tees and outfield, orientated north-west, played onto the existing 15th and 17th fairways.

- Re-aligned holes #1, #2 and #3;
- Shortened hole #5 (existing hole #3);
- Re-numbered hole #4 as new hole #5;
- Re-numbered hole #12 as new hole #6;
- Lengthened hole #13 as new hole #7;
- Lengthened hole #6 as new hole #8;
- Re-numbered hole #7 as new hole #9;

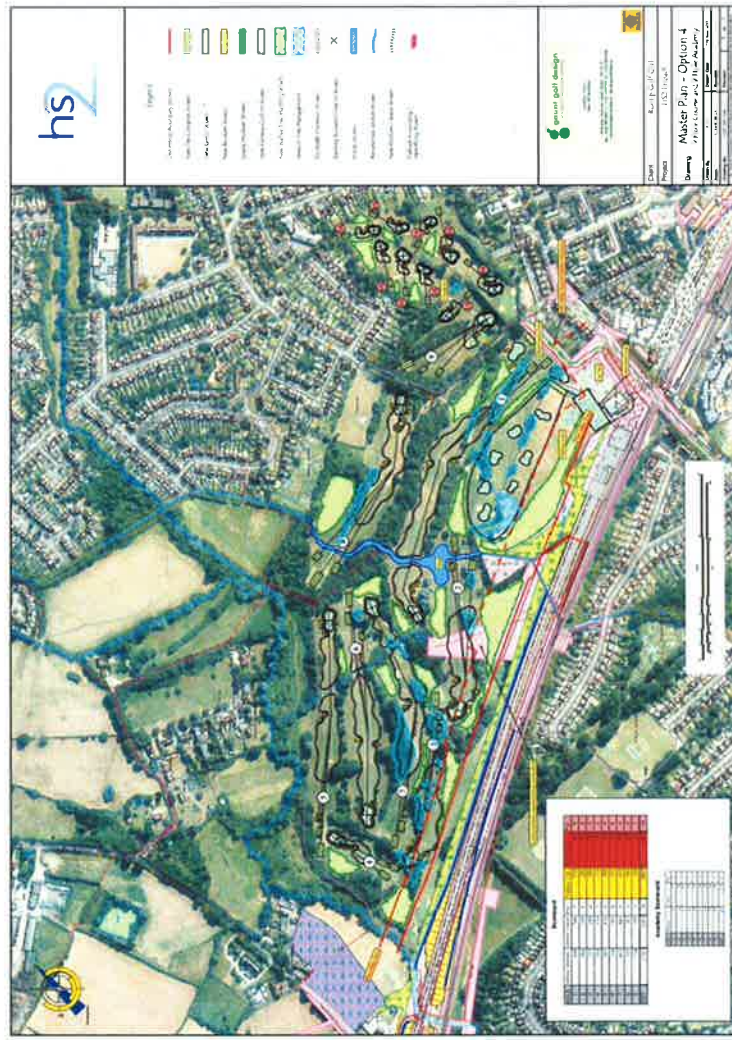
Other facilities:

- New putting green;
- New short game practice area/zone;
- Adventure Golf

Illustrative development budget cost = £2,453,000 (see Appendix 1 for full details)

Option 4 - 9-hole course and 9-hole academy course

Course length - 3053 yards, par 35 (9 holes) (played twice it is 6106 yards, par 70 – which is 535 yards longer and 1 shot greater to par) – Academy course – 518 yards, par 27 (9 holes)



In this option we have designed a 9-hole golf course layout which would be of “competition” standard and would be played twice (2x) to make an 18-hole course layout (slightly longer than in Option 3, because hole #9 is longer). The 9-hole academy course, as with Option 3, would be a “Par-3” course and would be sufficiently challenging to attract not just beginners and apprentice golfers, but also intermediate and more experienced golfers.

Re-aligned driving range tees and outfield, orientated north-west, played onto the existing 15th and 17th fairways.

- Re-aligned holes #1, #2 and #3;
- Shortened hole #5 (existing hole #3);
- Re-numbered hole #4 as new hole #5;
- Re-numbered hole #12 as new hole #6;
- Lengthened hole #13 as new hole #7;
- Lengthened hole #6 as new hole #8;
- Re-numbered hole #7 as new hole #9, but lengthened;

Other facilities:

- New putting green;
- New short game practice area/zone;
- Adventure Golf

Illustrative development budget cost = £2,700,500 (see Appendix 1 for full details)

Summary of Options:

Based upon the above there are a number of similarities – each option has the same practice facilities, for example, but it is the golf course layout that changes.

The 18-hole course layout is considered to be the “ideal” option, however, due to reduction in land area (because of the railway line), it is not possible to get a good length course and there will be many short holes as a result. This would be a disadvantage.

The 14-hole course option is more workable throughout the redevelopment of the golf course and during the railway line construction, but 14 holes are not ideal, plus in my opinion that Hillingdon Council will have a struggle to market and operate this to good effect and it will be a limitation on revenue.

Either of the two 9-hole course options is the best solution for the site at Ruislip GC, because it is an accepted and well-known kind of golfing facility in the golfing world. The second of the two – Option 4 – is, in my opinion, the best option for Hillingdon Council, subject to their approval, in that it offers most flexibility and greatest opportunity to make a success, in business-terms. This is, though, the most expensive option.

9-hole courses are becoming more attractive to play nowadays, due to the limitation upon time that people have available to commit to a sport or pastime. To play 9-holes is a maximum of 2 hours, compared to 4 hours plus for 18 holes.

If golfers decide to play 18 holes (9-holes played twice) on Option 4, the experience will be positive, in the respect that the ultimate (final) layout will be superior and more challenging for all golfers in relation to the existing/current course, because it has a good course length at 6106 yards, par 70 and a good balance of par-3, par-4 and par-5 holes.

D. Relevant benefits of each option.

Option 1

This is least disruptive to the existing course layout – using ten (10 no.) existing holes, all of which could continue to be played, with some small temporary modifications, during the construction of the new golf course features. However, an interim 10-hole course would not be advisable – we would devise a 9-hole course layout during the golf course construction period.

A 14-hole course is difficult to “market” as a “pay & play” (municipal) course, because it is an unusual number of holes, not divisible by 9. The normal number of holes is 18, therefore, if the course is not 18-holes, second best is a 9-hole course, played twice, which is easier to “market”. A 14-hole course would also be difficult to be ratified by England Golf, but not impossible.

The improvements to the driving range, which would be re-aligned and lengthened, would be a significant improvement compared with what currently exists – designed with targets and shaped/profiled to retain balls inside the outfield. Also, it would have new ball-stop netting and “berm” lighting which creates less of a “halo” in the sky and is more ambient and less visually intrusive.

The new putting green and short game zone offers additional practice facilities which make the golf course more complete – i.e. offering more attraction for a wider audience.

The Adventure Golf facility is a new addition and would be included to offer an attraction to the non-golfer and especially to families who may not have been introduced to the game/sport. Adventure Golf is a bit like “crazy golf” – but not quite as crazy! It is designed to be the “first rung on the ladder” – played as a putting course of 18-holes (using artificial turf), designed on a theme, attractively landscaped and floodlit, so it can be used at night.

The Adventure Golf Facility has been included to enhance the potential profit generating capacity of the golf course and is not considered to be in reinstatement of the current range of golf facilities at Ruislip Golf Course where it is included in all illustrative options provided.

Length of construction period = 18 months.

- Disruptive to play during construction – with the possibility of phasing the construction work to minimise or limit the disruption in certain areas of the course. Logistically, this would be difficult to manage for Hillingdon Council, with the need to cordon off the working areas for health & safety

reasons whilst heavy plant (machinery) is undertaking the work. Plus, the operatives/machine operators would need to be protected during the construction period. The added “unknown” is the impact poor weather can have on the construction work, and, then, on establishment. Delays cause further disruption to play and operation of the temporary golf course – which will impact upon the visitor/golfing experience. In fact, the golf course will seem like a building site during the entire construction period, which is not appealing to golfers and is likely to have a detrimental effect on revenue.

Option 2

This layout is more disruptive than Option 1 – only four (4 no.) full length holes from the original layout are retained (holes #5, #6, #7 and #8). The layout aims to achieve a “like-for-like” solution, in the respect that the existing 18-hole course is replaced by an 18-hole course. However, the 18-hole course we have designed could be considered to be inferior to the existing course in the respect that it is considerably shorter in length and the par is lower (61 compared with 69). Disruption during the construction period (of the new golf features) would be significant and complicated to manage by Hillingdon Council. In fact, in order to develop this design it would be advisable to close down the course.

This is something that needs careful consideration – there is potential for closing the course down completely in order to optimise on the golf course construction works – i.e. make them proceed more swiftly whilst there are no golfers there, thus reducing conflict and potential health & safety issues – especially in relation to the access into the site, through the existing car park.

See notes above concerning the driving range, putting green, short game zone and Adventure Golf.

Length of construction period = 24 months.

- I have advised that the entire golf course be closed whilst this work is undertaken to minimise the conflict between the construction team and golfers. It means that the work can be done more efficiently and effectively, without the need to be concerned about golfers playing the course.

Option 3

To accommodate the full-length 9-hole course layout (and 6-hole academy course) would be very disruptive upon the existing course layout, as only three (3 no.) holes from the original layout would be retained, however, these would be remodelled.

As with Option 2, it would be advisable to close down the course during the golf course redevelopment.

The 9-hole full-length course option is superior to the 18-hole course layout (which is shorter, in comparison) and the 14-hole course, too.

A 9-hole course would be played twice to make up a full round of golf, which would, equally, be a competitive round of golf, where the players would be able to gain an official handicap from England Golf. A “competition” golf course doesn’t need to be 18 holes – it could be 12 holes or it could be 9-holes. The governing body of golf in England is England Golf and they allow competitions to be played on 9-hole courses.

This facility would be eminently marketable, especially as there are numerous 9-hole courses throughout the UK, which function extremely well, are profitable and provide a good challenge and much enjoyment for thousands of golfers of all levels and abilities.

The 6-hole academy course would provide an excellent facility for the golf professional to give coaching/teaching sessions and lessons. Also, this would be attractive for golfers who are less experienced who would be able to improve their ability before moving up to the full-length 9-hole course. Many **experienced golfers would use this facility too, to improve their “short game”** – pitching and chipping, which is widely considered to be the most important part of the game.

See notes above concerning the driving range, putting green, short game zone and Adventure Golf.

Length of construction period = 24 months.

- I have advised that the entire golf course be closed whilst this work is undertaken to minimise the conflict between the construction team and golfers. It means that the work can be done more efficiently and effectively, without the need to be concerned about golfers playing the course.

Option 4

This layout is very similar to Option 3, except for the slight change to (new) hole #9, and the 9-hole pitch & putt course.

To accommodate this layout would be very disruptive upon the existing course, as, again, only three (3 no.) holes from the original layout would be retained, however, these would be remodelled.

As with Options 2 and 3, it would be advisable to close down the course during the golf course redevelopment.



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The positive comments I make above concerning the 9-hole full length course and 6-hole academy course also apply to this option. In addition, we have proposed a 9-hole pitch & putt course, which would still offer Hillingdon Council an 18-hole golf facility – albeit a shortened (18-holes) version, compared with the current layout.

See notes above concerning the driving range, putting green, short game zone and Adventure Golf.

Length of construction period = 24 months.

- I have advised that the entire golf course be closed whilst this work is undertaken to minimise the conflict between the construction team and golfers. It means that the work can be done more efficiently and effectively, without the need to be concerned about golfers playing the course.



E. Advise how any difference between the railway construction boundary and the railway operational boundary can be used to optimal effect in the final configuration of the golf course once the railway works are complete.

This “additional” area is a benefit to the 60 metre safety margin, as it will increase this margin to 80 metres, and more, in places.

We cannot compromise on the golf course layout during the construction phase – we have to assume that the railway construction boundary is the definitive future golf course boundary. Our designs have to be permanent to ensure that HS2 operatives are protected at all times while golf is being played on all golf holes and driving range at Ruislip GC (in the new layout/ arrangement/ alignments).

On completion of construction of the HS2 railway line the “additional” area would be used to extend (widen) the driving range – this could be built during the railway line construction period, but could not be brought into play, or become fully operational until it is completed.

F. Advise a potential timeline for each of the four options that will enable on-going availability of all or part of the golf course through the HS2 construction period.

Our designs do take this fact into account as we have used the boundaries in the ES and the LLAU, as set out in the Hybrid Bill.

The impact of the railway line construction, assuming the railway construction boundary is to be applied, will be minimal to the operation of the golf course in Option 1 (14 holes) – as I explained above, a 9-hole course layout (on which competitions could be held) could be accommodated throughout railway line construction and throughout the golf course redevelopment. However, this option would involve significant disruption to golf play/operation throughout its development, plus there would be potential health & safety conflicts relating to heavy plant/machinery accessing various parts of the golf course.

For Options 2, 3 and 4 the railway line construction programme becomes irrelevant, because I am recommending that the golf course is closed in totality during the golf course redevelopment.

Taking into account the railway construction boundary we would recommend that all areas of the existing golf course (outside of this boundary) be closed for play and that the golf course be redeveloped fully and completely, in parallel with the railway line construction programme/schedule.

Assuming the construction work on the railway line begins by year end 2016, we would recommend the development programme (separate document) for the golf course facilities at Ruislip GC – assuming Option 4 is chosen.



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SUGGESTED DEVELOPMENT PROGRAMME

See separate spreadsheet.



G. Advise whether and how far these considerations improve any or all of the four options in fully or partially achieving paragraph 5.4.23 from the ES CFA6.

As explained above, the only option where golf could continue to be played throughout the golf course and railway line construction process is in **Option 1** (14 holes). The resulting outcome, though, will not prove to be as effective in the long-term in relation to ease of operation, playability and marketability.

Although **Option 2** offers 18-holes, they are not as good, in many ways, as what already exists.

Option 3 offers the 9-hole course – the layout which is certainly attractive in terms of ease of operation and marketability, but only has a 6-hole academy course, i.e. the two circuits don't add up to 18-holes.

Option 4 – the 9-holes full length course and 9-holes pitch & putt course, adding up to 18-holes in total – this option will attract golfers of all ages, abilities and skill levels.

Also, this would help to complement the “golf offer” that Hillingdon Council would have, in the respect that golfers (or non-golfers) would have the option of playing one of the four golf facilities, each of which would have a distinctive attraction, without duplication.

Ruislip GC would be a family orientated golf centre, with every “entry-level” golf and excellent practice facilities available.

“Entry-level” could be described as a facility where the customer doesn't even need to have any experience of having played golf. The facilities offered would provide anyone, of any age, disability/ability and experience the ability to gain experience and skills necessary to learn the game from the most basic level through to the point at which they are capable of playing on the full-length golf course. All these facilities would be “on-site” at Ruislip GC. In this respect, it could also be described as a “cradle-to-grave” facility.

Equally, the facilities would be suitable for people taking up the game for the first time, at an affordable level, without the pressure of joining a private members golf club.

The Adventure Golf is attractive to the family group because anyone can play – it involves the family and can be played in a relatively short period of time – maximum 1 hour. Although this is, effectively, only a putting course, it introduces the non-golfer to the experience of hitting a ball with a club for the first time – the most basic golfing experience, but is great fun to play – children, teenagers, adults, parents and grandparents, alike can join in. The course would be designed for disabled access, as would all the golf facilities we have proposed.

The practice and training facilities we have proposed – putting green, short game practice area and driving range would all be designed to encourage golfers to improve their game still further, with trained and qualified teaching professionals giving coaching lessons to individuals and groups, teaching golf skills and rules of the game.

Once the golfer attains a slightly higher level they are ready to play the 9-hole academy/pitch & putt course, which is a brilliant opportunity to fine-tune what is considered to be the most difficult part of the game - shots of less than 100 yards. This course can be played on a “green-fee” basis, i.e. the golfer can pay a fee to play 9-holes or 18-holes, or it can be played with a teaching professional, or as part of a group lesson.

The golfer will continue to improve, with regular practice on the driving range, and be in a position, to play the 9-hole course, which has a good variety of golf holes of all lengths and challenges. The 9-holes will offer the golfer of every level the opportunity to play “every club in the bag” – allowing for even a “scratch” (0 handicap) amateur professional golfer to find the course challenging and exciting to play.

The 9-hole course would have multiple teeing positions on every hole, to make the challenge different when playing 2 circuits (2 x 9-holes) so as to make the course play like an 18-hole course. The multiple teeing positions will cater for golfers of all handicaps – from scratch (0) through to 56, depending upon the skill level and ability.

The new facilities at Ruislip GC would be attractive to every golfer.

APPENDIX 1 – ILLUSTRATIVE BUDGET COSTINGS FOR EACH OF THE FOUR (4 NO.) OPTIONS

RUISLIP GOLF COURSE - HS2 IMPACT ASSESSMENT - OPTION 1 MASTERPLAN - 14 HOLE COURSE					
RE-ROUTED 14-HOLES & PRACTICE FACILITIES					
	Metres	Yards	Par	COMMENTS	Projected cost
1	239	262	4	new par-4 hole	£100,000.00
2	223	244	3	new par-3 hole to existing green #10	£20,000.00
3	272	298	4	new par-4 hole to existing green #14	£20,000.00
4	268	294	4	new par-4 hole	£100,000.00
5	96	105	3	existing hole #3 with new tee complex	£20,000.00
6	381	417	4	existing hole #4	£0.00
7	347	380	4	existing hole #12	£0.00
8	277	303	4	existing hole #13	£0.00
9	126	138	3	existing hole #11	£0.00
OUT	2229	2440	33		£260,000.00
10	158	173	3	existing hole #5	£0.00
11	292	320	4	existing hole #6	£0.00
12	132	144	3	existing hole #7	£0.00
13	258	282	4	existing hole #8	£0.00
14	277	303	4	existing hole #9	£0.00
IN	1117	1222	18		£0.00
OUT	2229	2440	33		£260,000.00
TOTAL	3346	3661	51		£260,000.00
EXISTING COURSE LENGTH & PAR COMPARISON					
		5571	69		
DIFFERENCE +		-1910	-18		
OPTION 1 GOLF COURSE TOTAL					£260,000.00
NEW PUTTING GREEN					£40,000.00
NEW SHORT GAME PRACTICE ZONE					£50,000.00
NEW DRIVING RANGE TEES & OUTFIELD					£200,000.00
NEW BALL-STOP NETTING/FENCING					£175,000.00
COST OF DISMANTLING & REBUILDING OF EXISTING DRIVING RANGE BAYS					£75,000.00
UPGRADE/REFURBISHMENT OF DRIVING RANGE BAYS - NEW MATS, EQUIPMENT, ETC					£100,000.00
ADVENTURE GOLF					£300,000.00
SUB-TOTAL - COST OF DEVELOPMENT OF NEW GOLF FACILITIES					£940,000.00
CONSEQUENTIAL ADDITIONAL COSTS - relating to the new course layout & HS2 impact					
Automatic irrigation to full 14-hole golf course - existing system abandoned					£225,000.00
New borehole to supply irrigation system					£25,000.00
Tree removal and stump grinding to accommodate new fairways on holes #1 and #4, plus tree transplanting					£25,000.00
New woodland planting alongside HS2 rail line (Southern boundary) - native tree/shrub mix whips, transplants, standards, etc.					£100,000.00
New tree/shrub woodland planting on golf course - native tree/shrub mix whips, transplants, standards, etc					£100,000.00
Intensive drainage on new fairways #1 and #4 & driving range outfield to ensure year-round play					£80,000.00
New ditch crossings on holes #2 and #3					£5,000.00
New pathways between greens and tees					£20,000.00
Temporary road surfaces and fairway protection during construction period					£15,000.00
New car park extension/adjustments/modifications					£75,000.00
SUB-TOTAL					£670,000.00
ADDITIONAL MAINTENANCE & MANAGEMENT COSTS TO RUISLIP GC/HILLINGDON COUNCIL TO SUPPORT CONSTRUCTION OF NEW COURSE LAYOUT					
Temporary greens and tees during construction of new holes					£20,000.00
Additional labour for 18 months relating to maintenance of new holes - 1 man					£35,000.00
New course signage					£5,000.00
Project manager representing Ruislip GC/Hillingdon Council for liaison on site with golf course contractor & HS2					£50,000.00
Aftermath/reinstatement and repairs					£10,000.00
SUB-TOTAL					£120,000.00
TOTAL COURSE RE-DEVELOPMENT COSTS					£1,730,000.00
GOLF COURSE ARCHITECTS FEES & PLANNING APPLICATION (at a rate of 10% of development costs)					£173,000.00
GRAND TOTAL OF ENTIRE DEVELOPMENT INCLUDING COSTS EXCLUDING VAT					£1,903,000.00



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RUISLIP GOLF COURSE - HS2 IMPACT ASSESSMENT - OPTION 2 MASTERPLAN - 18 HOLE COURSE						
RE-ROUTED 18-HOLES & PRACTICE FACILITIES						
	Metres	Yards	Par	COMMENTS	Projected cost	
1	247	271	4	new par-4 hole	£100,000.00	
2	223	244	3	new par-3 hole to existing green #10	£20,000.00	
3	272	297	4	new par-4 hole to existing green #14	£20,000.00	
4	268	293	4	new par-4 hole	£100,000.00	
5	98	105	3	existing hole #3 with new tee complex	£20,000.00	
6	242	265	4	new par-4 hole	£100,000.00	
7	108	118	3	new par-3 hole to existing green #4	£20,000.00	
8	219	239	3	new par-3 hole	£90,000.00	
9	111	121	3	new par-3 hole to existing green #12	£20,000.00	
OUT	1786	1954	31		£490,000.00	
10	164	180	3	new par-3 hole	£90,000.00	
11	92	101	3	new par-3 hole to existing green #13	£20,000.00	
12	126	136	3	existing hole #11	£0.00	
13	158	173	3	existing hole #5	£0.00	
14	292	319	4	existing hole #6	£0.00	
5	132	144	3	existing hole #7	£0.00	
16	256	282	4	existing hole #8	£0.00	
17	127	139	3	new par-3 hole	£90,000.00	
18	141	154	3	new par-3 hole to existing green #9	£20,000.00	
IN	1490	1630	29		£220,000.00	
OUT	1786	1954	31		£490,000.00	
TOTAL	3276	3584	60		£710,000.00	
EXISTING COURSE LENGTH & PAR COMPARISON						
		5571	69			
DIFFERENCE +		-1987	-8			
OPTION 2 GOLF COURSE TOTAL						
					£710,000.00	
NEW PUTTING GREEN						£40,000.00
NEW SHORT GAME PRACTICE ZONE						£75,000.00
NEW DRIVING RANGE TEES & OUTFIELD						£200,000.00
NEW BALL-STOP NETTING/FENCING						£175,000.00
COST OF DISMANTLING & REBUILDING OF EXISTING DRIVING RANGE BAYS						£75,000.00
UPGRADE/REFURBISHMENT OF DRIVING RANGE BAYS - NEW MATS, EQUIPMENT, ETC						£100,000.00
SUB-TOTAL - COST OF DEVELOPMENT OF NEW GOLF FACILITIES						£1,200,000.00
CONSEQUENTIAL ADDITIONAL COSTS - relating to the new course layout & HS2 impact						
Automatic irrigation to full 18-hole golf course - existing system abandoned						£240,000.00
New borehole to supply irrigation system						£25,000.00
Tree removal and stump grinding to accommodate new fairways on holes #1 and #4, plus tree transplanting						£25,000.00
New woodland planting alongside HS2 rail line (Southern boundary) - native tree/shrub mix whips, transplants, standards, etc						£100,000.00
New tree/shrub woodland planting on golf course - native tree/shrub mix whips, transplants, standards, etc						£100,000.00
Intensive drainage on new fairways #1 and #4 & driving range outfield to ensure year-round play						£80,000.00
New ditch crossings on holes #2 and #3						£5,000.00
New pathways between greens and tees						£30,000.00
Temporary road surfaces and fairway protection during construction period						£25,000.00
New car park extension/adjustments/modifications						£75,000.00
SUB-TOTAL						£705,000.00
ADDITIONAL MAINTENANCE & MANAGEMENT COSTS TO RUISLIP GC/HILLINGDON COUNCIL TO SUPPORT CONSTRUCTION OF NEW COURSE LAYOUT						
Temporary greens and tees during construction of new holes						£30,000.00
Additional labour for 18 months relating to maintenance of new holes - 1 man						£35,000.00
New course signage						£5,000.00
Project manager representing Ruislip GC/Hillingdon Council for liaison on site with golf course contractor & HS2						£50,000.00
Aftermath/reinstatement and repairs						£10,000.00
SUB-TOTAL						£130,000.00
TOTAL COURSE RE-DEVELOPMENT COSTS						£2,035,000.00
GOLF COURSE ARCHITECTS FEES & PLANNING APPLICATION (at a rate of 10% of development costs)						£203,500.00
GRAND TOTAL OF ENTIRE DEVELOPMENT INCLUDING COSTS EXCLUDING VAT						£2,238,500.00



RUISLIP GOLF COURSE - HS2 IMPACT ASSESSMENT - OPTION 3 MASTERPLAN - 18 HOLE COURSE					
RE-ROUTED 18-HOLES & PRACTICE FACILITIES					
	Metres	Yards	Par	COMMENTS	Projected cost
1	499	546	5	new par-5 hole	£125,000.00
2	282	309	4	new par-4 hole	£100,000.00
3	273	299	4	new par-4 hole	£100,000.00
4	109	119	3	existing hole #3 with new tee complex, new green and bunkering	£75,000.00
5	381	417	4	existing hole #4 with new tee complex, new green and bunkering	£75,000.00
6	369	393	4	existing hole #12 with new tee complex, new green and bunkering	£75,000.00
7	403	441	4	existing hole #12 with new tee complex, new green and bunkering	£75,000.00
8	331	362	4	new par-4 hole	£100,000.00
9	132	144	3	existing hole #7 with new tee complex, new green and bunkering	£75,000.00
TOTAL	2769	3029	35		£800,000.00
EXISTING COURSE LENGTH & PAR COMPARISON					
9-HOLE COURSE PLAYED TWICE TO MAKE AN 18-HOLE COURSE					
		6058	70		
EXISTING COURSE		5571	69		
DIFFERENCE +		487	1		
OPTION 3 GOLF COURSE TOTAL					£800,000.00
NEW 6-HOLE ACADEMY COURSE					£300,000.00
NEW PUTTING GREEN					£40,000.00
NEW SHORT GAME PRACTICE ZONE					£75,000.00
NEW DRIVING RANGE TEES & OUTFIELD					£200,000.00
NEW BALL-STOP NETTING/FENCING					£175,000.00
COST OF DISMANTLING & REBUILDING OF EXISTING DRIVING RANGE BAYS					£75,000.00
UPGRADE/REFURBISHMENT OF DRIVING RANGE BAYS - NEW MATS, EQUIPMENT, ETC					£100,000.00
ADVENTURE GOLF					£300,000.00
SUB-TOTAL - COST OF DEVELOPMENT OF NEW GOLF FACILITIES					£1,265,000.00
CONSEQUENTIAL ADDITIONAL COSTS - relating to the new course layout & HS2 impact					
Automatic irrigation to full 18-hole golf course - existing system abandoned					£210,000.00
New borehole to supply water to irrigation system					£25,000.00
New pond and open ditch feature on holes #1, #2 and #8					£75,000.00
Tree removal and stump grinding to accommodate new fairways on holes #1 and #4, plus tree transplanting					£25,000.00
New woodland planting alongside HS2 rail line (Southern boundary) - native tree/shrub mix whips, transplants, standards, etc.					£100,000.00
New tree/shrub woodland planting on golf course - native tree/shrub mix whips, transplants, standards, etc.					£100,000.00
Intensive drainage on all new fairways & driving range outfield to ensure year-round play					£150,000.00
New ditch crossings on holes #1, #2, #3, #5, #6, #7 & #8					£20,000.00
New pathways between greens and tees					£30,000.00
Temporary road surfaces and fairway protection during construction period					£25,000.00
New car park extension/adjustments/modifications					£75,000.00
SUB-TOTAL					£835,000.00
ADDITIONAL MAINTENANCE & MANAGEMENT COSTS TO RUISLIP GC/HILLINGDON COUNCIL					
TO SUPPORT CONSTRUCTION OF NEW COURSE LAYOUT					
Temporary greens and tees during construction of new holes					£30,000.00
Additional labour for 18 months relating to maintenance of new holes - 1 man					£35,000.00
New course signage					£5,000.00
Project manager representing Ruislip GC/Hillingdon Council for liaison on site with golf course contractor & HS2					£50,000.00
Aftermath/reinstatement and repairs					£10,000.00
SUB-TOTAL					£130,000.00
TOTAL COURSE RE-DEVELOPMENT COSTS					£2,230,000.00
GOLF COURSE ARCHITECTS FEES & PLANNING APPLICATION (at a rate of 10% of development costs)					£223,000.00
GRAND TOTAL OF ENTIRE DEVELOPMENT INCLUDING COSTS EXCLUDING VAT					£2,453,000.00

RUISLIP GOLF COURSE - HS2 IMPACT ASSESSMENT - OPTION 4 MASTERPLAN - 9 HOLE COURSE & 9-HOLE ACADEMY COURSE					
RE-DESIGNED 9-HOLES MAIN COURSE, 9-HOLES ACADEMY COURSE & PRACTICE FACILITIES					
	Metres	Yards	Par	COMMENTS	Projected cost
1	499	546	5	new par-5 hole	£125,000.00
2	282	309	4	new par-4 hole	£100,000.00
3	273	299	4	new par-4 hole	£100,000.00
4	109	119	3	existing hole #3 with new tee complex, new green and bunkering	£75,000.00
5	381	417	4	existing hole #4 with new tee complex, new green and bunkering	£75,000.00
6	359	393	4	existing hole #12 with new tee complex, new green and bunkering	£75,000.00
7	403	441	4	existing hole #12 with new tee complex, new green and bunkering	£75,000.00
8	331	362	4	new par-4 hole	£100,000.00
9	154	168	3	existing hole #7 with new tee complex, new green and bunkering	£75,000.00
TOTAL	2791	3053	35		£800,000.00
EXISTING COURSE LENGTH & PAR COMPARISON					
9-HOLE COURSE PLAYED TWICE TO MAKE AN 18-HOLE COURSE					
		6106	70		
EXISTING COURSE		5571	69		
DIFFERENCE +		535	1		
OPTION 4 GOLF COURSE TOTAL					
					£800,000.00
NEW 9-HOLE ACADEMY COURSE					
					£450,000.00
NEW PUTTING GREEN					
					£40,000.00
NEW SHORT GAME PRACTICE ZONE					
					£75,000.00
NEW DRIVING RANGE TEES & OUTFIELD					
					£200,000.00
NEW BALL-STOP NETTING/FENCING					
					£175,000.00
COST OF DISMANTLING & REBUILDING OF EXISTING DRIVING RANGE BAYS					
					£75,000.00
UPGRADE/REFURBISHMENT OF DRIVING RANGE BAYS - NEW MATS, EQUIPMENT, ETC					
					£100,000.00
ADVENTURE GOLF					
					£300,000.00
SUB-TOTAL - COST OF DEVELOPMENT OF NEW GOLF FACILITIES					£1,415,000.00
CONSEQUENTIAL ADDITIONAL COSTS - relating to the new course layout & HS2 impact					
Automatic irrigation to 9-hole main and 9-hole academy golf course - existing system abandoned					
					£240,000.00
New borehole to supply water to irrigation system					
					£25,000.00
New pond and open ditch feature on holes #1, #2 and #8					
					£75,000.00
Tree removal and stump grinding to accommodate new fairways on holes #1, #2, #3, #7 and #8, plus tree transplanting					
					£50,000.00
New woodland planting alongside HS2 rail line (Southern boundary) - native tree/shrub mix whips, transplants, standards, etc					
					£100,000.00
New tree/shrub woodland planting on golf course - native tree/shrub mix whips, transplants, standards, etc					
					£100,000.00
Intensive drainage on all new fairways & driving range outfield to ensure year-round play					
					£150,000.00
New ditch crossings on holes #1, #2 and #8					
					£20,000.00
New pathways between greens and tees					
					£50,000.00
Temporary road surfaces and fairway protection during construction period					
					£25,000.00
New car park extension/adjustments/modifications					
					£75,000.00
SUB-TOTAL					£910,000.00
ADDITIONAL MAINTENANCE & MANAGEMENT COSTS TO RUISLIP GC/HILLINGDON COUNCIL					
TO SUPPORT CONSTRUCTION OF NEW COURSE LAYOUT					
Temporary greens and tees during construction of new holes					
					£30,000.00
Additional labour for 18 months relating to maintenance of new holes - 1 man					
					£35,000.00
New course signage					
					£5,000.00
Project manager representing Ruislip GC/Hillingdon Council for liaison on site with golf course contractor & HS2					
					£50,000.00
Aftermath/reinstatement and repairs					
					£10,000.00
SUB-TOTAL					£130,000.00
TOTAL COURSE RE-DEVELOPMENT COSTS					£2,455,000.00
GOLF COURSE ARCHITECTS FEES & PLANNING APPLICATION (at a rate of 10% of development costs)					
					£245,500.00
GRAND TOTAL OF ENTIRE DEVELOPMENT INCLUDING COSTS EXCLUDING VAT					£2,700,500.00

Gaunt Golf Design Report 11 October 2016



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DESIGN REPORT ON THE REINSTATEMENT OF 5 SOUTHERN GOLF HOLES

AT

UXBRIDGE GOLF COURSE, ICKENHAM, UXBRIDGE, LONDON BOROUGH OF HILLINGDON

prepared for

High Speed 2 Ltd

by

JONATHAN CHARLES GAUNT, BA (Hons), Dip LA (Leeds), EIGCA

11th October 2016





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BRIEF

- A. Background to the report.

- B. To prepare a design report assessing the feasibility of reinstating the 5 'former Southern holes' at Uxbridge Golf Course, which were removed in the National Grid pipeline works. HS2 Ltd require an estimate of the cost to reinstate the holes and the proposal should use 135,000m³ of HS2 excavated mainly clay subsoil material. Assume the rest of the course remains the same as the current 13 hole layout.

- C. Summary.



A. BACKGROUND TO THE REPORT

1. This Design Report has been prepared in relation to the proposed High Speed Two Railway Line, the infrastructure of which will affect Uxbridge Golf Course.
2. The report will assess the feasibility of reinstating 5 former golf holes on the southern part of the existing course, which was abandoned following the installation of a gas pipeline by National Grid.
3. To assist in assessing the impact we have been provided with various documents and scaled plans/drawings by HS2 Ltd.
4. We have previously prepared an advisory report for HS2 Ltd, submitted on 3rd August 2015, which was investigating the impact of a haul road on the golf course. Prior to this we produced a preliminary report, which was submitted on 25th May 2015. The August report was related to the original appointment, but provided more detail, based upon the suggested haul road route by HS2 Ltd.
5. We have used a Google Aerial photo extract to create a base plan, upon which we have overlaid the information from HS2 engineering plans.
6. We have produced one (1 no.) design option (GGD-230-2645) (see page 5) illustrating how the golf course could be re- configured/re-designed to provide Hillingdon Council with an operational 18-holes golf course facility, following construction of the HS2 railway line.
7. I am now providing my professional opinion, as a qualified Golf Course Architect (and Landscape architect), as to my findings and recommendations.

B. FEASIBILITY OF AN 18-HOLE COURSE LAYOUT AT UXBRIDGE GC

In order to access the 5 southern holes a simple haul road is proposed, to follow the footpath/bridleway as it crosses the course from east to west (across holes #1, #12, #6, #7, #8 and alongside holes #9 and 'spare hole #13'). This route enables the haulage trucks/lorries to travel across/through the course on an established constructed road, albeit a gravel surface. This will need to be upgraded to take the traffic during construction works.

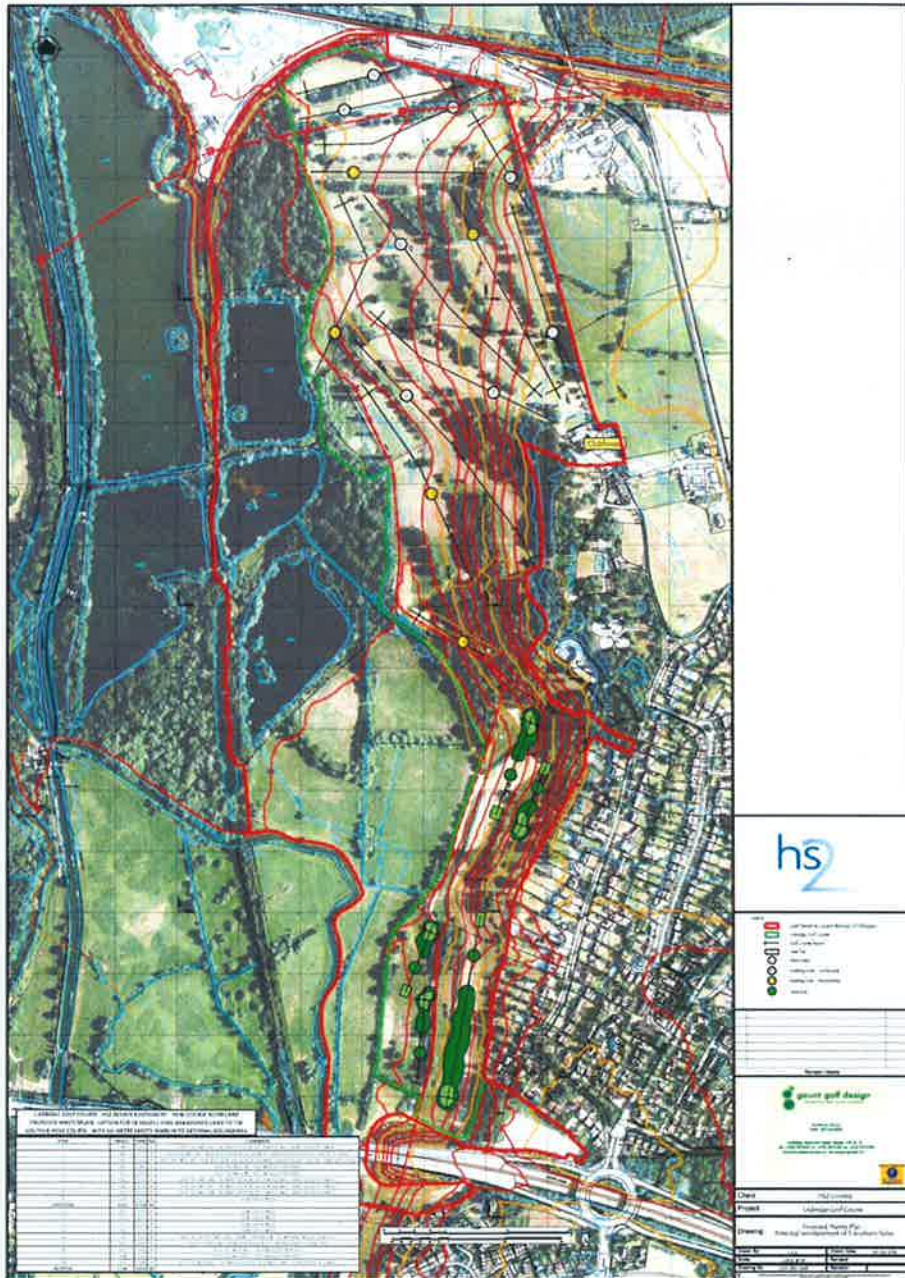
The golf course will need to be closed during construction works, because this road crosses/affects 7 no. golf holes. This will ensure that no health & safety conflicts (from flying/errant golf balls) occur in relation to golfers/golf course staff and HS2 operatives/workers (in relation to construction machinery and plant on site).

It is possible to create 5 no. new golf holes on the southern land – 1 no. par-4 hole and 4 no. par-3 holes. This means an 18-hole course can be reinstated on the 'abandoned' land for Hillingdon Council, which currently does not exist at Uxbridge GC. These new holes are designed to be safe to play for all levels of golfer, with industry-accepted safety margins taken into account – 60 metres from fairway centre-line to external boundaries. No safety netting is required.

Some refinement of the golf course design may be required/necessary, dependent upon the final alignment of the electricity cables/pylons and the exact alignment of the gas pipeline, which will need to be surveyed.

The summary of the golf course design changes/modifications we propose is shown on the Masterplan (GGD-230-2645) overleaf:

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A summary of the modifications illustrated on the masterplan are outlined on the table below:

UXBRIDGE GOLF COURSE - HS2 DESIGN ASSESSMENT - SHOWING NEW COURSE SCORECARD & BUDGET COSTINGS - FINAL COSTS TO BE CONFIRMED FOLLOWING COMPETITIVE TENDER					
PROPOSED MASTERPLAN - OPTION FOR 18 HOLES USING ABANDONED LAND TO THE SOUTH					PROPOSED BUDGET COST
18-HOLE COURSE - WITH 60-METRE SAFETY MARGIN TO EXTERNAL BOUNDARIES					
HOLE	Men's tees			COMMENTS	
	Metres	Yards	Par		
1	296	324	4	EXISTING HOLE #1 - FAIRWAY REPAIRS FOLLOWING HAUL ROAD REINSTATEMENT	£20,000
2	184	201	3	EXISTING HOLE #2 - POSSIBLE GREEN RE-ALIGNMENT (DEPENDS ON ELECTRIC CABLES/PYLONS)	£40,000
3	295	323	4	EXISTING HOLE #3 - POSSIBLE TEE & GREEN RE-ALIGNMENT (DEPENDS ON ELECTRIC CABLES/PYLONS)	£60,000
4	260	284	4	EXISTING HOLE #4 - NO CHANGES PROPOSED	£0
5	160	175	3	EXISTING HOLE #5 - NO CHANGES PROPOSED	£0
6	430	470	4	EXISTING HOLE #6 - FAIRWAY REPAIRS FOLLOWING HAUL ROAD REINSTATEMENT	£20,000
7	332	363	4	EXISTING HOLE #7 - FAIRWAY REPAIRS FOLLOWING HAUL ROAD REINSTATEMENT	£20,000
8	460	503	5	EXISTING HOLE #8 - FAIRWAY REPAIRS FOLLOWING HAUL ROAD REINSTATEMENT	£15,000
9	105	115	3	NEW PAR-3 HOLE	£75,000
OUT/TOTAL	2522	2758	34		£250,000
10	305	334	4	NEW PAR-3 HOLE	£75,000
11	150	164	3	NEW PAR-4 HOLE	£100,000
12	107	117	3	NEW PAR-3 HOLE	£75,000
13	160	175	3	NEW PAR-3 HOLE	£75,000
14	120	131	3	EXISTING 'SPARE' HOLE #13 - SOME DRAINAGE & TEE IMPROVEMENTS REQUIRED	£25,000
15	350	383	4	EXISTING HOLE #9 - SOME DRAINAGE & TEE IMPROVEMENTS REQUIRED	£60,000
16	306	335	4	EXISTING HOLE #10 - NO CHANGES PROPOSED	£0
17	268	293	4	EXISTING HOLE #11 - NO CHANGES PROPOSED	£0
18	364	398	4	EXISTING HOLE #12 - FAIRWAY REPAIRS FOLLOWING HAUL ROAD REINSTATEMENT	£20,000
IN/TOTAL	2130	2329	32		£430,000
				MODIFICATIONS TO/UPGRADE OF IRRIGATION SYSTEM	£150,000
				ADDITIONAL MISCELLANEOUS DRAINAGE IMPROVEMENTS FOLLOWING HAUL ROAD REPAIRS	£50,000
				DRAINAGE WORKS ON NEW HOLES	£100,000
				NEW ACCESS PATHWAYS - 850 LIN. M (£40/LIN. M)	£34,000
				NEW LANDSCAPING TO SATISFY PLANNING CONDITIONS	£100,000
SUB-TOTAL					£434,000
TOTAL CONSTRUCTION COSTS					£1,114,000
SUGGESTED CONTINGENCY 15%					£167,100
TOTAL GOLF COURSE REDEVELOPMENT COSTS					£1,281,100
ARCHITECTS FEES @ 10%					£128,110
N.B. - THE ABOVE COSTS RELATE SPECIFICALLY TO THE GOLF COURSE WORKS ONLY - ALL REINSTATEMENT/REPAIR WORKS, AS A RESULT OF HS2 OPERATIONS ON SITE AT UXBRIDGE GC, ARE TO BE COSTED SEPARATELY AND WILL BE ADDITIONAL TO THESE STATED ABOVE.					

The work of the golf course contractor, as mentioned in the table above, will include: all cut/fill earthworks for golf course features (not bulk earthmovement); drainage works on golf course features (including herringbone drainage system, drainage carpet and sand/soil rootzone on greens and tees and herringbone drainage system and sand in bunkers); irrigation system supply and installation; final topsoil respreading/replacement/refinement (for golf course features only); cultivation works for all golf course and working areas; seeding of all features; pathways construction and new landscaping (native trees and shrubs) relating to the golf course areas only.

C SUMMARY

As can be seen above, the development costs are substantial. These costs are based upon current rates (2016) of an experienced, reputable golf course contractor, undertaking all golf course construction works to a good standard. This standard will be better, in fact, than the existing golf holes at Uxbridge GC. It would not be advisable to build any new golfing facilities/features to a standard that does not ensure year-round play.

In these costings, an assumption is made, also, that the imported subsoil is not "double-handled". HS2 Ltd will need to ensure that there will be a constant flow/delivery of subsoil material for the golf course contractor, but all necessary earthmoving equipment (dumpers/dozers/excavators) will need to be provided for the golf course architect on the golf course site to undertake, in relation to the imported subsoil, the following work:

1. Strip topsoil and store in easily accessible locations;
2. Deliver subsoil to exact locations, as per design option chosen, as directed by Golf Course Architect;
3. Spread subsoil in 30cm layers and track in to correct compaction target;
4. Shape up subsoil (95% accuracy to design contours) according to detailed design plans/drawings;
5. Replace topsoil on all newly formed golf course areas/new features to correct and uniform depth.

If this can be provided, then the golf course development cost should not increase in accordance with the table on page 6.

Please note that no planning application costs are included, nor the fees of any specialist consultants – for example, an Environmental Impact Assessment may be required. Equally, there is an additional cost associated with applying to Environment Agency for soil importation permits. These costs will need to be identified.

APPENDIX 7

Angling Lakes

