



Departures			
12:20	Manchester	DL4429	Flight closing 8
12:25	Dublin	EI159	Flight closing 84
12:30	Frankfurt	LH905	Flight closing 17
12:30	Munich	LH9997	Go to Gate A18
12:35	Newark	UA16	Flight closing 3
12:40	Düsseldorf	LH3383	Go to Gate 21
12:40	Düsseldorf	3K3817	Boarding 28
13:00	Ottawa	SQ305	Boarding 1
13:05	Singapore	LH2475	Gate opens 12:40
13:20	Munich	LH2475	Gate opens 12:40
13:30	Montreal	AC965	Gate opens 12:40
13:30	Lisbon	TP359	Gate opens 12:40
13:30	San Francisco	UA931	Gate opens 12:35
13:35	Houston	UA971	Go to Gate 10
13:35	Frankfurt	LH907	Gate opens 13:00
13:45	Zurich	LX333	Gate opens 13:10
13:50	Stockholm	SK532	Gate opens 13:20
13:55	Stuttgart	4U2461	Gate opens 13:15
14:00	Cairo	MS778	Gate opens 12:45
14:05	Cork	BA5929	Gate opens 13:20
14:05	Copenhagen	SK504	Gate opens 13:35
14:20	Dublin	EI183	Gate opens 13:35
14:25	Vancouver	LH8840	Gate opens 13:35
14:25	Geneva	LX355	Gate opens 13:50
14:45	Hamburg	LH3393	Gate opens 14:05
15:00	Toronto	TP8272	Gate opens 14:10
15:10	Belfast City	BA5935	Gate opens 14:25
15:10	Frankfurt	LH909	Gate opens 14:30
15:10	Edinburgh	DL4435	Gate opens 14:30
15:20	Shannon	BA5943	Gate opens 14:40
15:25	Munich	LH2477	Gate opens 14:20
15:25	Chicago	LH9356	Gate opens 14:20
15:25	Aberdeen	DL4425	Gate opens 14:40
15:35	Auckland	NZ001	Gate opens 14:40
via Los Angeles			
15:35	Oslo	SK906	Gate opens 15:00
15:50	Cologne	4U465	Gate opens 15:00
15:50	Newark	UA941	Gate opens 15:00
16:10	Istanbul	TK1986	Gate opens 15:00
16:20	Dublin	EI189	Gate opens 15:00
16:20	Washington	LH9266	Gate opens 15:00
16:25	Edinburgh	DL4437	Gate opens 15:00
16:35	Athens	A3603	Gate opens 15:00
16:45	Manchester	DL4419	Gate opens 15:00
16:50	Frankfurt	LH911	Gate opens 15:00
16:50	Zurich	LX325	Gate opens 15:00
17:00	Copenhagen	SK506	Gate opens 15:00
17:05	Geneva	LX349	Gate opens 15:00



AIRPORT EXPANSION CONSULTATION

HEATHROW AIRPORT EXPANSION CONSULTATION DOCUMENT

JUNE 2019





Table of contents

	page		page		page
1. Foreword	5	4. Construction	39	7. Managing the effects of expansion	71
2. Introduction	6	4.1. Indicative construction programme	40	7.1. Air quality and odour	72
2.1. Heathrow today	6	Anticipated early works	40	7.2. Community	73
2.2. The background to Heathrow expansion	8	DCO approval to runway opening (2021 to around 2026)	41	7.3. Health	74
2.3. Our previous consultations	9	From runway opening (around 2026) to approximately 115 mppa (around 2030)	42	7.4. Noise	75
2.4. This consultation	10	From approximately 115 mppa (around 2030) to approximately 130 mppa (around 2035)	43	7.5. Socio-economic and employment	80
2.5. What happens next?	12	From approximately 130 mppa (around 2035) to approximately 142 mppa (around 2050)	44	7.6. Transport network users	81
3. Our Preferred Masterplan	14	4.2. Construction and logistics management	45	7.7. Biodiversity	82
3.1. Airfield	16	4.3. Managing the effects of construction	47	7.8. Historic environment	83
3.2. Terminals, satellites and aprons	18	5. Future operations	49	7.9. Land quality	84
3.3. Roads and rail	20	5.1. Runway alternation	51	7.10. Landscape and visual impact	85
3.4. Active travel	23	5.2. Ban on scheduled night flights	56	7.11. Water environment	86
3.5. Water environment	24	5.3. Directional preference	59	7.12. Carbon	88
3.6. Airport supporting development	26	5.4. Early growth	60	7.13. Climate change	89
3.7. Parking	28	6. Travelling to and from Heathrow – surface access proposals	63	7.14. Waste	90
3.8. Displaced land uses and community facilities	30	6.1. Public transport	64	8. Growing within environmental limits	91
3.9. Landscape	32	6.2. Colleague travel	66	9. Community fund	93
3.10. Utilities	32	6.3. Car parking	67	10. Property and compensation	95
3.11. Phasing the expansion of Heathrow	33	6.4. Road user charging	68	11. Airspace	99
Phase 1 – 2026 (Opening day)	34	6.5. Taxi and private hire	68	12. Have your say	101
Phase 2 – 2030 (approximately 115 mppa)	35	6.6. Freight	69	13. Next steps	104
Phase 3 – 2035 (approximately 130 mppa)	36	6.7. Intelligent mobility	69	14. Consultation questions	105
Phase 4 – 2050 (approximately 142 mppa)	37				



1. Foreword

Since our airport operations began over 70 years ago, Heathrow has played a unique role in the development of the surrounding area, and we are proud of the partnerships we share with local communities. Today, we are committed to working closely with our neighbours to develop plans for an expanded airport and ensure that we deliver a fairer Heathrow for the next generation.



John Holland-Kaye
Chief Executive
Heathrow

A year ago, Parliament voted to approve the Airports National Policy Statement. This has given us a confident platform to continue through the planning process.

Following our two previous public consultations, we have listened to your feedback and used it to develop our proposals for an expanded Heathrow.

Now, we want to share our developed thinking and hear your views as part of our statutory consultation.

What is this consultation about?

This Airport Expansion Consultation seeks your views on four key areas:

- Our Preferred Masterplan for expansion: our proposals for the future layout of the airport including the runway and other airport infrastructure such as terminals and road access. We also set out how the airports growth will be phased to achieve the Preferred Masterplan – from runway opening in around 2026, to the end masterplan in approximately 2050;
- Our plans to operate the future airport: how the future three runway airport will be operated, including important elements such as night flights and alternation, as well as how potential additional flights before the new runway opens could be operated on our existing two runways;
- Our assessment of effects of the airport's growth: our preliminary assessment of the likely effects of expansion on the environment and local communities;
- Our plans to manage the effects of expansion: our proposals for mitigating the effects of expansion, including property compensation, our Noise Insulation Policy, a Community Fund, and measures to mitigate against air pollution, carbon and other environmental effects.

A local legacy for the future

Expansion is not just about minimising impacts, but about maximising opportunities; it will create thousands of new jobs and double the number of apprenticeships by 2030, giving local young people a launchpad as they set out on their careers. Expansion would connect the whole of the UK to global growth by opening up new trading routes, so that businesses of all sizes can connect to markets across the world.

Collaboration is key to making the most of these opportunities, to delivering Expansion in a way which is fair to local communities, and to helping us create a local legacy for the next generation.

This consultation is another chance for you to have your say and help shape our plans for our future airport. I urge everyone to get involved, learn about our proposals, and let us know what you think.

We are grateful for your time, and I thank you in advance for your feedback.

2. Introduction

This document will help you find out more and have your say on our statutory consultation on our proposals for the expansion of Heathrow, referred to as 'the Project'.

In this section we explain Heathrow as it is today, the background and the need for Heathrow expansion, and the consultations we have carried out so far. It also gives details on how you can provide us with your views.

The document goes on to provide a summary of our proposals and their effects and helps you to identify where you can find more detailed information.



2.1. Heathrow today

Heathrow is the UK's only hub airport and the UK's biggest port by value for trade with countries outside the EU. Heathrow currently serves more than 200 destinations in more than 80 countries, connecting the UK to the world and the world to the UK.

It is not just passengers that travel through Heathrow; over £100bn worth of imports and exports with countries outside the EU were shipped through Heathrow in 2018, helping British businesses access customers in every corner of the globe.

But Heathrow's existing runways are full and have been for over a decade. International airlines have grown their route networks at European airports like Paris and Frankfurt instead. These airports have capitalised on opportunities from new connections to growing economies in Asia and the Americas.

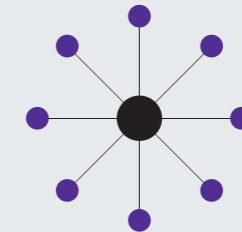
The airport currently consists of four terminals and two runways, which serve approximately 80 million passengers each year (referred to in this document as million passengers per annum, or mppa).

The terminals are accessed from the M25 and M4 and via the local road network. Rail, London Underground, coach and bus stations are also located in all terminal areas.

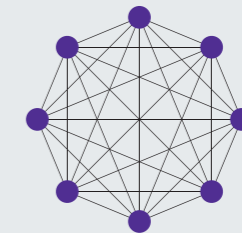
Passenger and colleague car parking areas are located around the airport, with frequent bus services linking these areas to the terminals.

What is a hub airport?

Hub airports combine direct passengers, transfer passengers and freight so that they can fill aircraft and serve destinations that cannot be served by airports which rely on local demand alone. Transfer passengers at a hub airport allow the UK to enjoy faster, year-round connections to countries to which it could not otherwise sustain a direct flight.

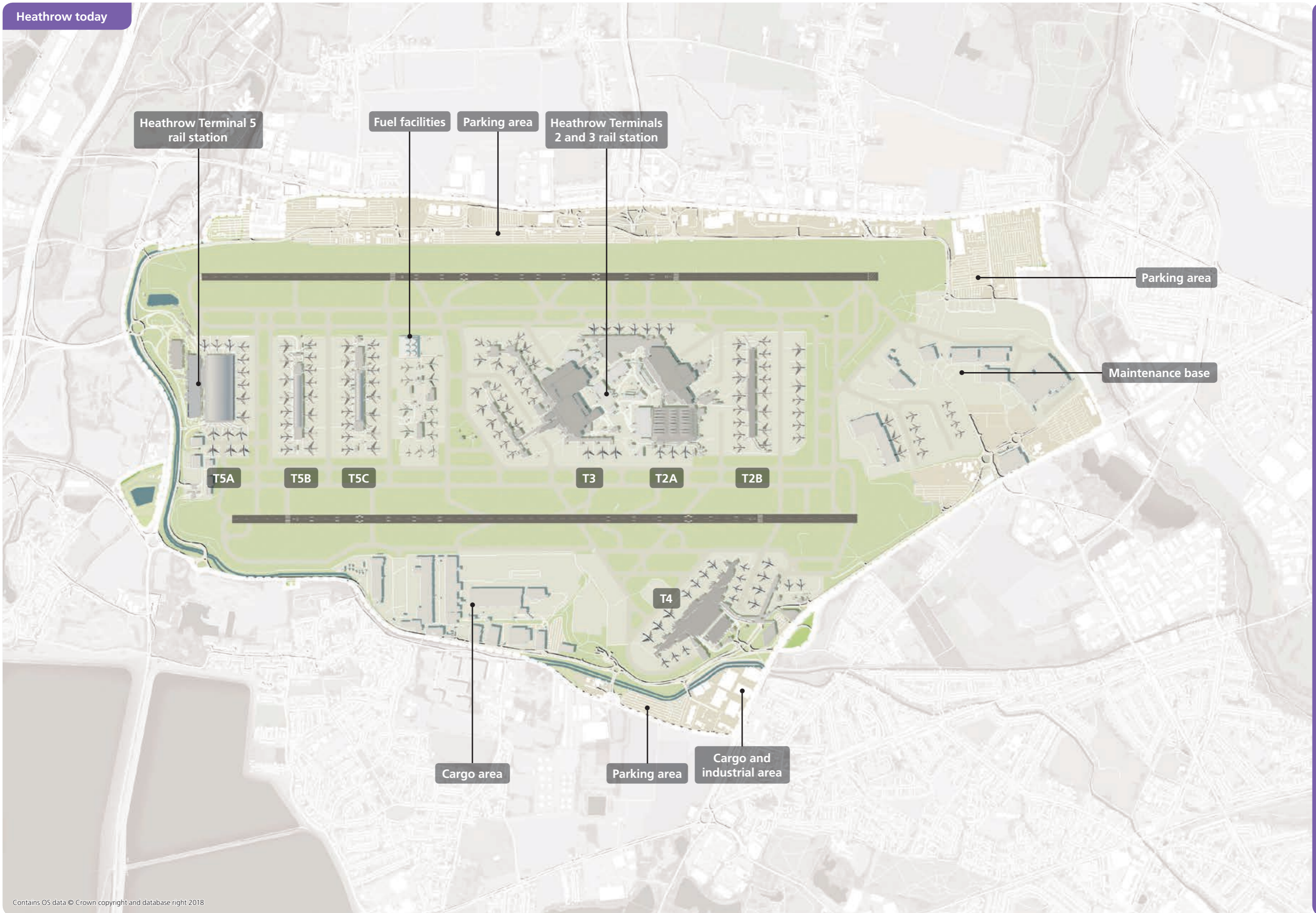


Hub
Linking 9 points requires 8 routes



Point-to-Point
Linking 8 points requires 28 routes

Heathrow today



Section 2

2.2. The background to Heathrow Expansion

Airports Commission

In July 2015, the independent Airports Commission reported the conclusions of its three-year study examining the need for additional capacity to maintain the UK's position as Europe's most important aviation hub. It found that there is a need for additional runway capacity in the South East of England, and unanimously concluded that a new north west runway at Heathrow, combined with a package of measures to address environmental and community effects, presented the strongest case for meeting that need and offered the greatest strategic and economic benefits.

Government support and draft Airports National Policy Statement

In October 2016, following further review, the Government announced that it endorsed the Airports Commission's recommendation, and backed a new north west runway at Heathrow. It also announced that an Airports National Policy Statement (Airports NPS) would be brought forward to provide policy for the preferred scheme, and that a draft Airports NPS would be subject to public consultation and scrutiny by Parliament. National Policy Statements are put in place by Government to provide the policy framework for nationally significant infrastructure projects, such as the expansion of Heathrow.

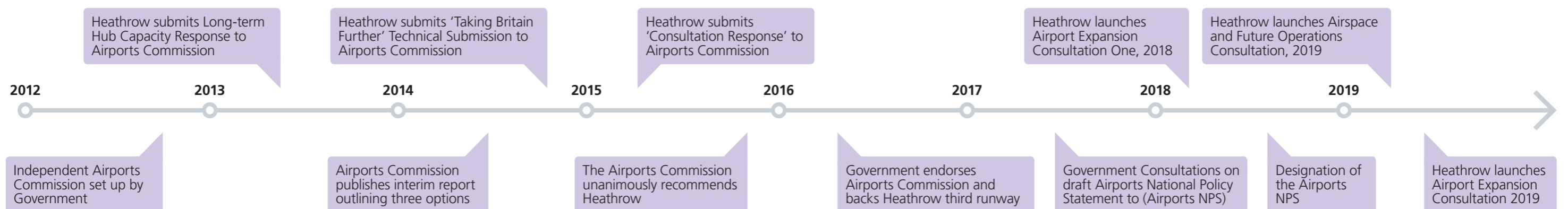
In February 2017 the Government published and consulted on a draft Airports NPS. A revised draft of the Airports NPS was published for a second round of consultation later that year.

Designation of Airports National Policy Statement

In June 2018, following approval by Parliament, the Secretary of State for Transport designated the Airports NPS.

The Airports NPS confirms policy support for a north west runway at Heathrow, and establishes the primary policy framework for deciding whether our proposals to expand Heathrow should be granted development consent. It also recognises the important role that the expansion of Heathrow has to play in supporting the wider UK economy.

We have developed our proposals to respond to this policy taking account of feedback that we have received in response to our consultations and our engagement with stakeholders. In this document, you will find information on our proposals to expand Heathrow and grow over the coming years.



2.3. Our previous consultations

As we prepare and plan for our airport's growth, we are committed to working closely with a wide range of stakeholders to ensure we deliver the right final plan for expansion. Consultation is an important way for us to understand the views of a wide range of individuals and groups, helping us to carefully balance our plans to deliver a successful project and leave a positive legacy for the future.

We are committed to:

- delivering journeys that are simple and quick with the best service in the world;
- growing sustainably to create a lasting legacy for all of the UK, whilst reducing our effects on the environment and local communities;
- creating a values-led service culture with sustainability, diversity and respect at its heart;
- providing airlines and their customers with an affordable, efficient, sustainable and reliable airport; and
- making Heathrow an attractive global investment and securing Heathrow's role at the heart of the British economy.

To date, we have undertaken two main consultations on our proposals for the expansion of Heathrow:

- **Airport Expansion Consultation One and Airspace Principles Consultation (January to March 2018)**

During our first stage of consultation, we consulted on our emerging proposals and options for the expansion of the airport. We called this 'Airport Expansion Consultation One'. This was an opportunity for you to influence our thinking at an early stage, when options for various aspects of the Project were being considered. At the same time, we also consulted on the principles we should apply when developing the new airspace design that will be needed for an expanded Heathrow. We called this our 'Airspace Principles Consultation'.

- **Airspace and Future Operations Consultation (January to March 2019)**

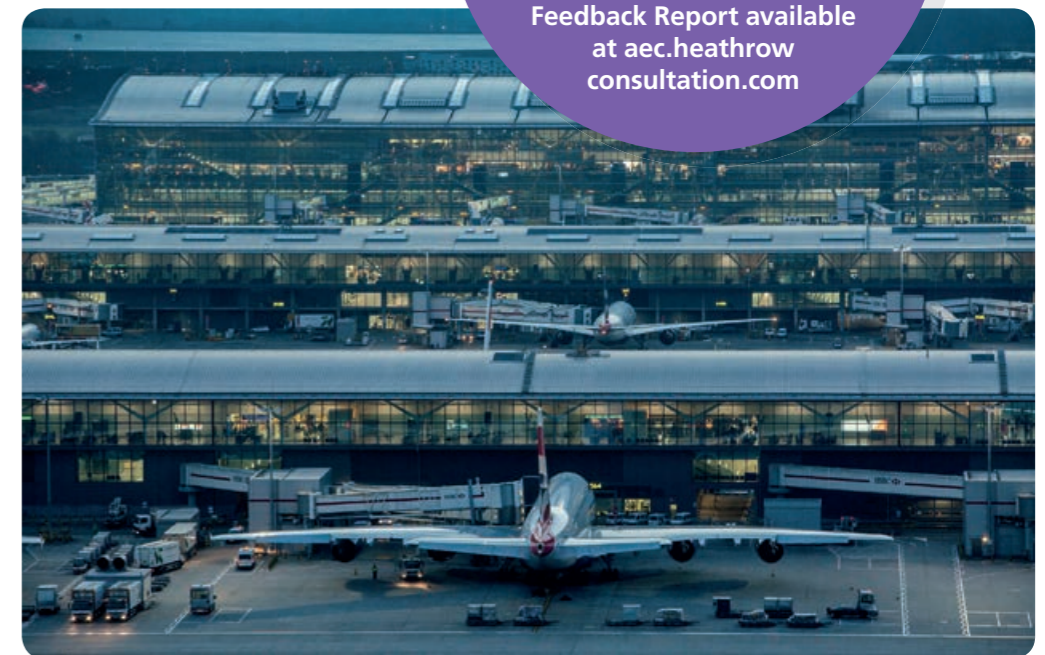
During our second stage of consultation, we consulted on our future operations and airspace changes for an expanded Heathrow. We presented airspace design envelopes (the geographic areas where flight paths could be positioned in future) and asked you to comment on any local factors we should consider when designing new flight paths to and from Heathrow. We also asked about the ways that we could operate the runways for an expanded Heathrow, including how we could provide breaks from aircraft noise through our initial proposals for runway and airspace alternation, along with how we should manage night flights in the future.

We have carefully considered all feedback received in response to our consultations as we have developed our proposals. We have also carried out engagement with the Heathrow Community Engagement Board (HCEB), the Heathrow Strategic Planning Group (HSPG), and many other stakeholders to help us develop and refine our proposals and our approach to consultation.

A summary of previous consultation responses and how they have been taken into account can be found in our two separate Consultation Feedback Reports: Consultation One Consultation Feedback Report and Future Operations Consultation Feedback Report available at aec.heathrowconsultation.com



We need to obtain planning consent for our expansion proposals in the form of a Development Consent Order (DCO). Changes to airspace design go through a separate airspace approval process overseen by the Civil Aviation Authority (CAA) and the Department for Transport. **Sections 2.5** and **11** of this document explain how our consultations fit within these two processes.



In this document we use the word "effects" to describe the potential positive and negative impacts of the Project, on the environment and communities.

2.4. This consultation

We are now consulting on our preferred proposals for developing and operating an expanded Heathrow, including the effects of expansion and how we intend to manage them.

In this consultation we are seeking feedback on:

- Our Preferred Masterplan for expansion;
- Our plans to operate the future airport;
- Our assessment of the effects of the airport's growth;
- Our plans to manage the effects of expansion.

Your feedback will help us to further refine our proposals before we submit our application for a DCO, planned for 2020.

This consultation is a statutory consultation being carried out in accordance with the requirements of the Planning Act 2008 and associated legislation and guidance. It is an important part of the planning process that applies to the Project. More information about the planning process can be found on the next page and in the **How do we obtain approval to expand Heathrow?** document.

For the flight paths for our three-runway airport, we are following the CAA's Airspace Change Process. This requires us to carry out ongoing airspace design work and stakeholder engagement to develop our flight path options.



As part of this consultation, we are presenting preliminary environmental information to give an initial view of the likely significant environmental effects of expanding the airport. You can find out more about this and the environmental assessment process in **section 7** of this document.

We expect to consult on these in 2022 as part of the separate Airspace Change Process. However, in line with the Airports NPS we have developed indicative flight path options for an expanded Heathrow and these have been used as the basis for our assessment of environmental effects which is presented in this consultation.



For more information about the indicative flight path options and the **Airspace Change Process** please see **section 11** of this document.

Other documents and information

We have set out our proposals in a number of documents covering different topics and different levels of detail. All of these are available on our website aec.heathrowconsultation.com, at document inspection locations and at our consultation events.

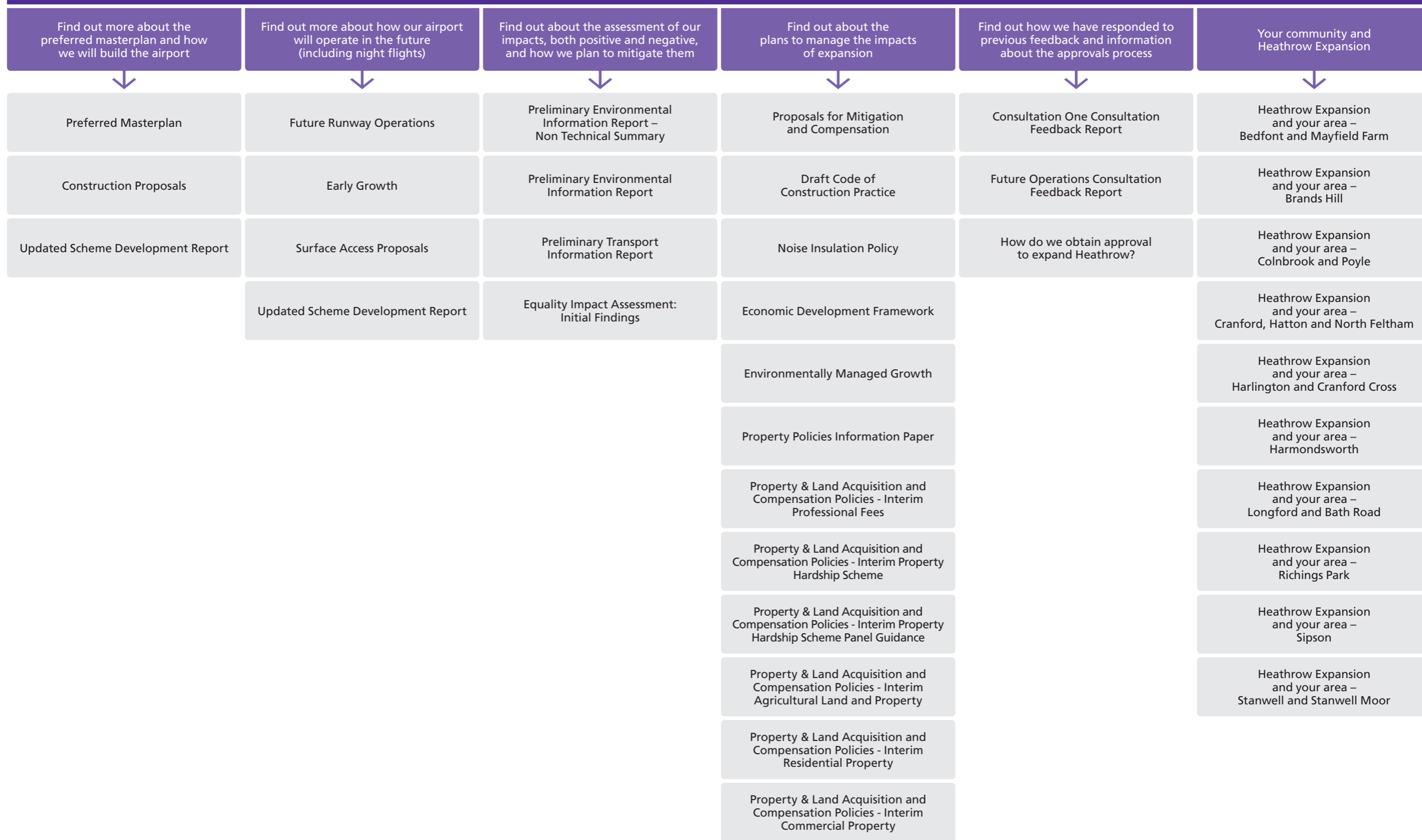


For further information on the **consultation events** and **document inspection locations** please see **section 12** of this document.



AIRPORT EXPANSION CONSULTATION DOCUMENT

Overview and summary of the below documents



FEEDBACK FORM

Have your say on the consultation by using the Airport Expansion Consultation Feedback Form or on our website aec.heathrowconsultation.com





2.5. What happens next?

In this consultation we would like your feedback on a range of topics and we have set out questions to help you respond.

This consultation will run from 18 June until 11:55pm on 13 September 2019

The questions can be found in **section 14** of this document. You do not need to answer every question.

You can provide us with your comments in several ways:

-  **Online** using the feedback form at our website aec.heathrowconsultation.com
-  **Email** us at feedback@heathrowconsultation.com
-  Complete a paper **feedback form**, available at events or on request using the contact details provided in this document
-  **Write** to us at Freepost LHR AIRPORT EXPANSION CONSULTATION

We are also holding a number of consultation events where you can speak to a member of the Heathrow team and find out more about the consultation. You can also pick up copies of the consultation documents, watch our videos and animations, and view a model of the expanded airport. Further information on our consultation events can be found in **section 12** of this document.

Following the close of this consultation, we will review our proposals, taking into consideration all of the feedback received alongside the findings of our ongoing design and assessment work and feedback from engagement.

We will then refine our expansion proposals as we prepare our DCO application. Our DCO application will be supported by an Environmental Statement and a range of supporting technical and other documents. We will also produce a Consultation Report which will set out details of the feedback received and how it has been considered in the development of our application.

We are on track to submit our DCO application to the Planning Inspectorate in 2020 and, subject to consent being granted, for our new runway to open in around 2026.

January - March 2018
Airport Expansion Consultation One

January 2019
Airspace and Future Operations Consultation

June 2019
Airport Expansion Consultation

2020
DCO submission

2020/21
Examination

2021
Decision

What is a Development Consent Order (DCO)?

The Planning Act 2008 establishes the consenting process for nationally significant infrastructure projects (often referred to as NSIPs). NSIPs are projects considered to be so large and important that permission to build them must, by law, be given at a national level by a Secretary of State.

The construction or alteration of an airport falls under the Planning Act 2008 regime, where the proposed increase in passenger capacity would be at least 10 million additional passengers per year. Our proposed expansion of Heathrow will exceed this threshold and so is classified as an NSIP.

Our proposed diversion of the M25 is also classified as an NSIP for which the National Networks National Policy Statement is the principal policy document.

Because our expansion proposals are NSIPs, we need to obtain development consent from the Secretary of State for Transport in the form of a Development Consent Order (often referred to as a DCO). A DCO is a piece of legislation (law) that combines consent to develop, operate and maintain a project, alongside a range of other approvals that would normally have to be obtained separately, such as listed building consent and environmental consents. A DCO can also contain powers for the compulsory acquisition and temporary possession of land.

We will submit our application for development consent (our DCO application) to the Planning Inspectorate, and an independent examining authority will then be appointed to examine it on behalf of the Secretary of State. During the examination stage, anybody with an interest in the Project can participate and make representations in writing or orally at hearings.

Once the examination is complete, the examining authority will submit a report and recommendation on the application to the Secretary of State for Transport, who will then make a decision on whether or not to grant the DCO.

For further information please see the **How do we obtain approval to expand Heathrow?** document.





3. Our Preferred Masterplan

Heathrow's vision is to give passengers the best airport service in the world. The layout of an expanded Heathrow – and all the different parts or components within it – is crucial to achieving this vision. Our latest thinking on the layout of the future airport's physical infrastructure is called our Preferred Masterplan.

As well as providing excellent passenger experience, our Preferred Masterplan must also work for local communities, airlines, freight operators, commuters, our investors and other airport users, while being sustainable, efficient and fulfilling our commitments to the environment. This section explains how we have developed our Preferred Masterplan to balance these requirements.

The expansion of Heathrow is made up of a number of different parts, or components, which when put together form our Preferred Masterplan.

During Airport Expansion Consultation One, we presented options for these components and asked for feedback on them. Our Preferred Masterplan takes account of that feedback, as well as that received through engagement with our communities and stakeholders and the findings of our ongoing surveys and assessments.

This section summarises the main parts which make up our Preferred Masterplan before explaining how we propose to develop and deliver these plans over time.



For more information please read the **Preferred Masterplan** document. To see how we have narrowed down options to reach our Preferred Masterplan, see the **Updated Scheme Development Report**.

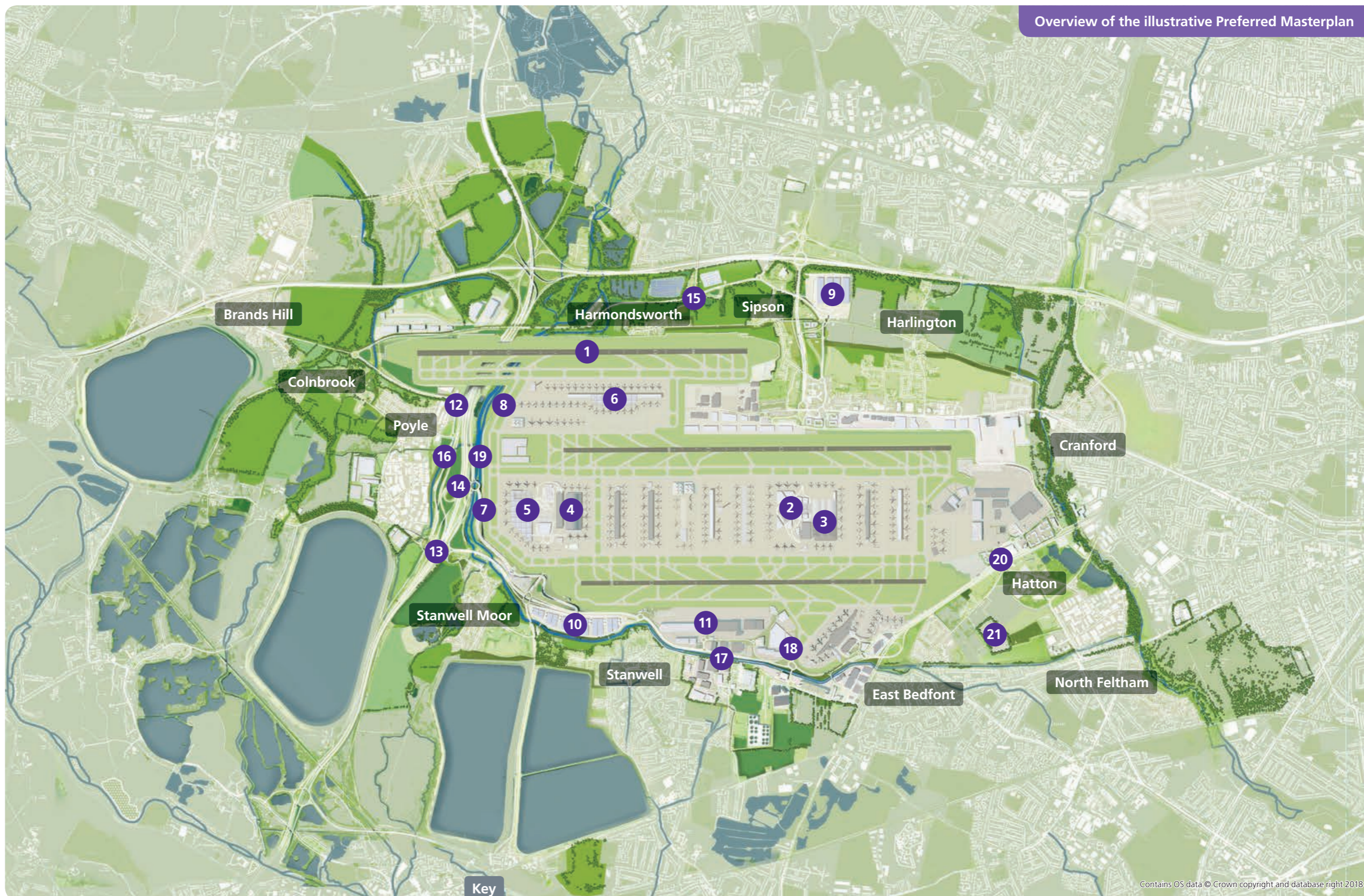
The Preferred Masterplan is illustrative but represents an interpretation of how the end state could look when constructed within parameters.



Our masterplan and how we operate the airport may need to adapt to changing circumstances, for example, it is not possible to predict how passenger or airline needs may change or how technology may develop. We therefore expect to apply for some parts of our masterplan in detail and for some in outline (by reference to parameters).

As a result, we cannot design all parts of our proposals to the same level of detail at the same time. We need to keep some flexibility for parts of the Project, particularly where these will not be built for many years. We also recognise that some of our proposals may need to change over time.

Overview of the illustrative Preferred Masterplan



Key

- | | | | |
|--------------------------------|----------------------|-----------------------------|--|
| 1. Northwest Runway | 7. Bypass Taxiways | 13. M25 Junction 14 | 19. Diverted Rivers |
| 2. Central Terminal Area (CTA) | 8. ATETs | 14. M25 Junction 14a | 20. Hatton Cross Development |
| 3. Enlarged T2A | 9. Northern Parkway | 15. Realigned A4 | 21. Site for re-provided Immigration Removal Centres |
| 4. T5A | 10. Southern Parkway | 16. Realigned A3044 | |
| 5. T5X | 11. Cargo Area | 17. Southern Perimeter Road | |
| 6. T5XN | 12. Realigned M25 | 18. Southern Road Tunnel | |

Contains OS data © Crown copyright and database right 2018

3.1. Airfield

Since the first private aerodrome opened on the site in 1930, Heathrow's airfield has been continually adapted and improved, resulting in the strategically important hub airport which exists today.

Expansion will enable us to further improve our airfield, prioritising efficiency for airlines and passengers whilst balancing the needs of our local communities. In particular, our entire Project has been designed around a scheme with the proposed new runway to the north west of the existing two runways, to minimise the effects of noise for local communities, including densely populated areas in London.

The new airfield will be made up of the new north west runway and related infrastructure, including taxiways.

In line with the Airports NPS, the proposed runway will be 3,500m long and located north west of the airport. It has a total width of 60m, which includes a 45m wide runway with 7.5m wide paved shoulders on each side. The distance between the centreline of the proposed new runway and the centreline of the existing northern runway will be 1,035m.

The position of this runway was considered to be the best performing option as it will minimise environmental effects and property loss.

The new runway has been designed to allow aircraft to touchdown approximately 550m further along the runway than would typically be the case at Heathrow today. This is known as a 'displaced threshold' and will help to reduce the effects of noise on our neighbours as aircraft will be higher as they fly over local communities.



© Heathrow Airport Limited 2019

Around the End Taxiways (ATETs) will be positioned at the western end of the central runway and will allow aircraft to travel between the new runway and the existing airfield without affecting the operation of the central runway. Positioning the taxiways in this area will minimise taxiing time to the northern runway and have less effect on residential and commercial property than if taxiways were built to the east.

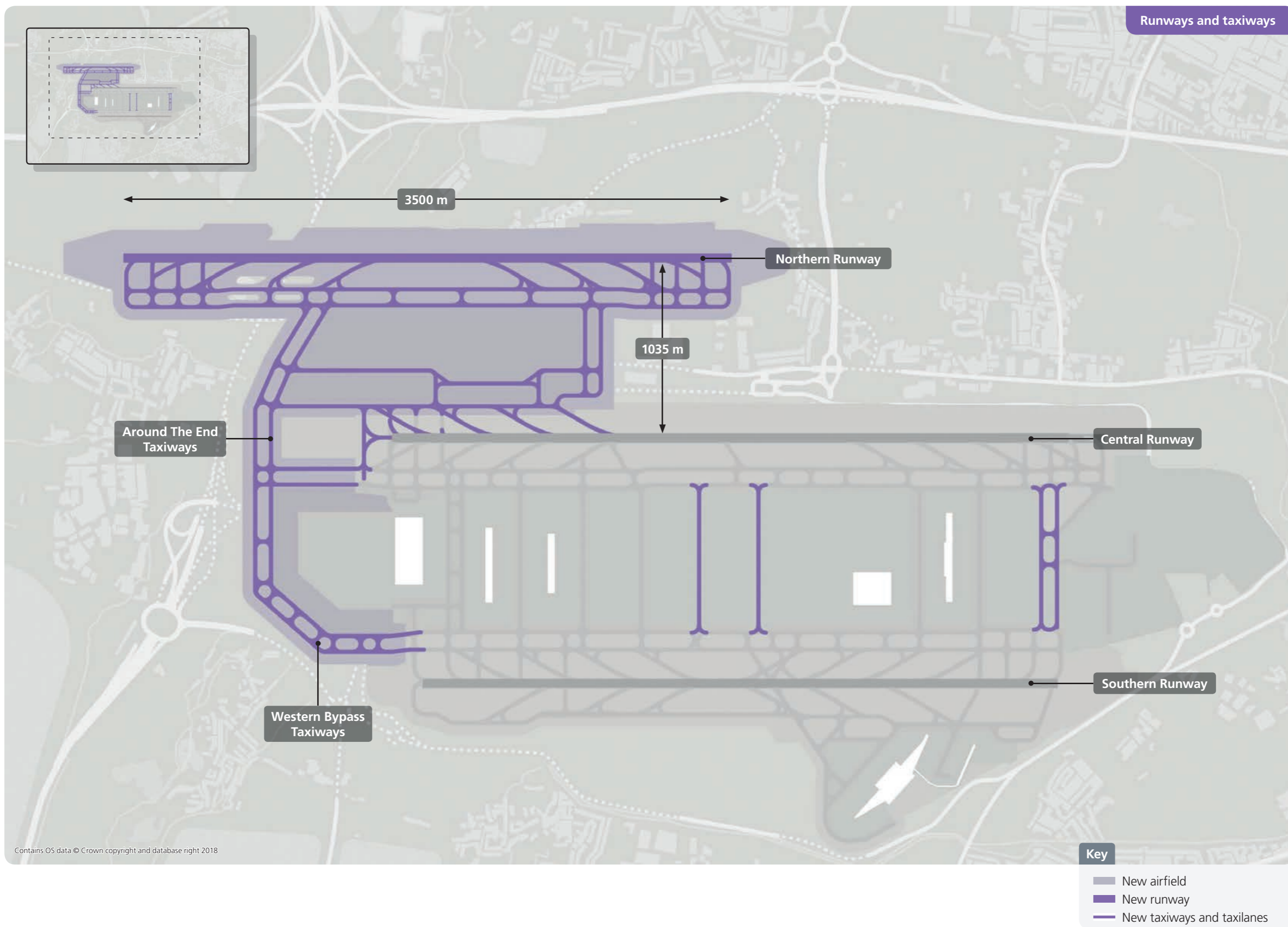
Western Bypass Taxiways will be located to the west of Terminal 5 and will help to reduce congestion within the existing airfield by providing an alternative north-south route for taxiing aircraft.

What are taxiways?



Taxiways act as the 'arteries' of the airport, enabling aircraft to move between areas for parking, refuelling and boarding passengers safely and efficiently.

Runways and taxiways



3.2. Terminals, satellites and aprons

Terminals are where passengers spend most of their time at an airport and are important to the overall passenger experience. Terminals 2 and 5 have both been named the world's best airport terminal in the last two years, and Heathrow has been voted the best airport in Western Europe.

What are terminals, satellites and aprons?



Terminals are buildings at an airport that provide all of the facilities needed to allow passengers to board and disembark from aircraft. Some passengers will board aircraft directly from terminals, whereas others will transfer to remote satellites to board aircraft at 'remote satellite terminals'.

Aircraft require areas for parking, unloading or loading, refuelling and boarding passengers. These are known as aprons and are usually located adjacent to terminals or satellites.

Expansion is an opportunity to build on this, and make our terminal capacity more efficient, support world-class passenger service, and build sustainability and great design into our plans.

New terminal capacity and apron space will be split between the expanded Terminal 5 Campus and the Central Terminal Area (CTA), comprising Terminals 2 and 3. It has been positioned to minimise land take by making the best use of land between the existing runways.

In the CTA the extension of Terminal 2 to the north (T2A) and the construction of satellites T2C and T2D will increase capacity to 52 million passengers per annum (mppa). Terminal 3 is proposed to be demolished in the later stages of the construction of the Project and aircraft stands will be provided in its place.

The CTA will be reconfigured to deliver an improved Public Transport Interchange for buses and trains and commercial areas.

Terminal 1 will be demolished, whilst Terminal 4 will be modified to allow for changes to the southern runway.

The Terminal 5 Campus will be reconfigured and expanded, increasing the throughput of passengers from 33mppa to 40mppa. The Terminal 5 stand layout will be reconfigured to increase the number of points where aircraft can connect to the terminal.

A new terminal and apron, T5X, will be constructed and connected to the west of Terminal 5. At a later stage T5X will be expanded with a northern satellite, referred to as T5X North located between the existing central runway and the proposed runway.

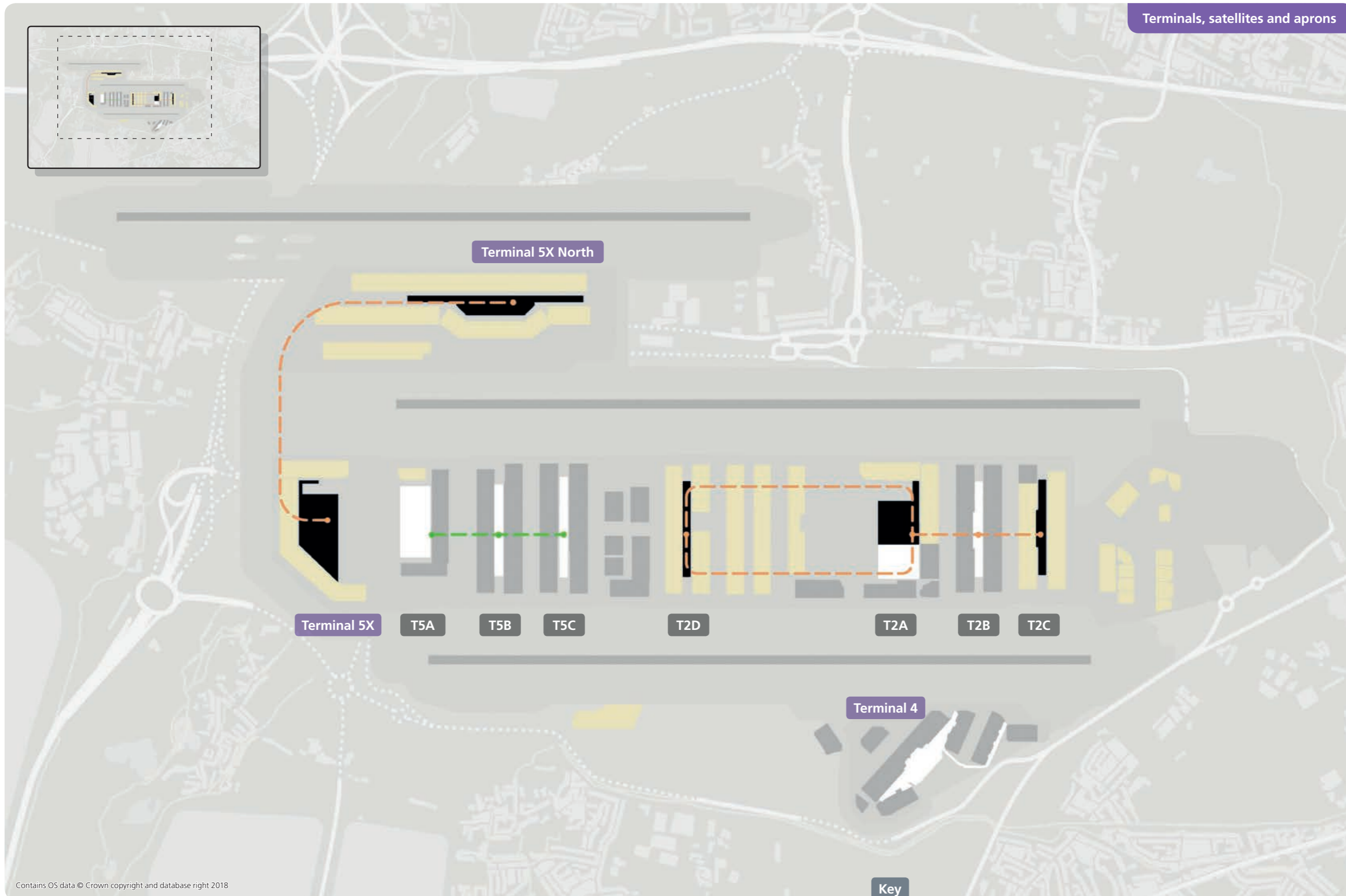
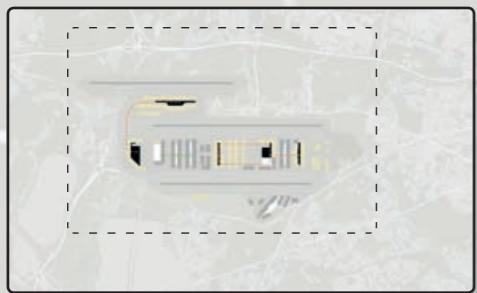


Terminals 5 and 5X will include a public transport interchange, vehicle drop off/ pick-up, passenger transit facilities, commercial developments and supporting facilities, such as hotels and offices.

Terminals in the CTA and expanded T5 Campus will be connected with new parking facilities provided at two multi-storey car parking locations, known as parkways.







These will be located to the north and south of the airport near the strategic road network and will reduce journeys on airport and local roads.

Terminals, satellites and aprons



Contains OS data © Crown copyright and database right 2018

Key

 Proposed terminals and satellites	 Existing terminals and satellites
 Proposed aprons	 Existing aprons
 Proposed passenger transit system	 Existing passenger transit system

3.3 Roads and rail

Sustainable and resilient surface connections play a key role in ensuring our passengers and colleagues can reach the airport and surrounding areas. With expansion, Heathrow's position as an integrated transport hub will grow, with new coach, rail, bus and cycle routes to the airport.

Our objective as the airport grows is to ensure that the increasing number of passengers, colleagues and freight can be accommodated by improved surface connectivity in a way that does not affect local communities. To do this we need to manage surface access to limit both emissions and congestion, as well as relieving current issues on the local transport network – road and rail – and providing additional local connectivity.

As part of the expansion of Heathrow a number of roads around the airport, including the M25 and local roads, such as the A4 and A3044, and their associated junctions will need to be diverted. We will also introduce bus priority and cycling measures to ensure sustainable travel is a key part of these proposals.

M25

The M25 will be diverted offline with supporting collector distributor roads, that will help avoid weaving between junctions. Diverting offline means that the existing M25 will remain open while the diversion is built reducing effects on road users.

This will allow the new M25 carriageway and tunnel under the proposed runway to be constructed largely offline, up to 150m to the west of the existing M25.

The realigned motorway will be lowered by up to 4-4.5m into a tunnel under the proposed runway. The tunnel will be made up of four boxes – two for the new M25 mainline carriageways and one each for the northbound and southbound distributor roads. Crossing a motorway with a runway or taxiway has been done successfully at other airports around the world such as Paris (Charles de Gaulle) and Atlanta.

M25 Junctions

Changes will be made to surrounding junctions to maintain access to the M25 and connecting routes.

Junction 14 will have an enlarged roundabout to enable connection to the new A3044 north.

A new roundabout at the eastern side of the existing Junction 14a will elevate it above the A3044, M25 and the proposed new river corridor (for further information please see **section 3.5** of this document).

A3044

The A3044 provides an important connection between West Drayton in the north and Staines to the south.

The proposed diversion runs parallel to the M25 to the west, bypassing Poyle. This option minimises property loss, effects on the Green Belt and avoids the construction of an extra tunnel beneath the new north west runway.

The road will include a cycleway and we are also investigating the option of incorporating local widening for bus priority measures.

A4

The A4 will be diverted from a new junction east of the Emirates Roundabout, northwards parallel to the M4 spur before crossing it just south of M4 Junction 4. It will pass Sipson to the north and then run north of Harmondsworth and be vital in connecting communities.

Between the Emirates roundabout and Holloway Lane junction it will be a dual link-road. To the east of Holloway Lane, it will be a wide single carriageway before re-joining the existing alignment of the A4 at a new junction just to the east of Brands Hill. The final road widths will be refined in due course to meet traffic capacity requirements, whilst including provision for bus and cycle priority measures.

The route of the A4 proposed includes a link road to the east of the M4 Spur to ensure it maintains its role as a local road rather than merging with the motorway.

Central Terminal Area (CTA) Access

A new Southern Road Tunnel will be constructed to connect Beacon Road Junction roundabout to the south with the CTA. This will transform access to the airport from the south delivering significant benefits for local communities and businesses.

The importance of this connection has been highlighted by consultees and it will provide a new link for public transport (buses and coaches) and other vehicles. We are also investigating its suitability as a route for cyclists accessing the CTA from the south.

Southern Perimeter Road

The Southern Perimeter Road will be diverted to the north of the Southern Parkway and will link to the upgraded Stanwell Moor Junction.

It will be widened, with new roundabouts constructed at Seaford Road and Stirling Road to replace existing junctions. The Seaford Road roundabout will provide access to and from the Southern Parkway site. The Stirling Road roundabout will provide access to the consolidated cargo centre.

Stanwell Moor Junction

There will be a new multi-level roundabout junction on the A3113 at Stanwell Moor to enhance connectivity with the south of the airport. The option proposed has been chosen to minimise effects on property.

Rail

The existing Colnbrook branch line ('railhead') provides an important opportunity to move bulk construction materials to Heathrow and save thousands of HGV trips. The branch line is displaced by the new runway, but will be realigned to ensure that aviation fuel supply is maintained to the expanded airport, and a new rail head is proposed to optimise the sustainable transport of materials.

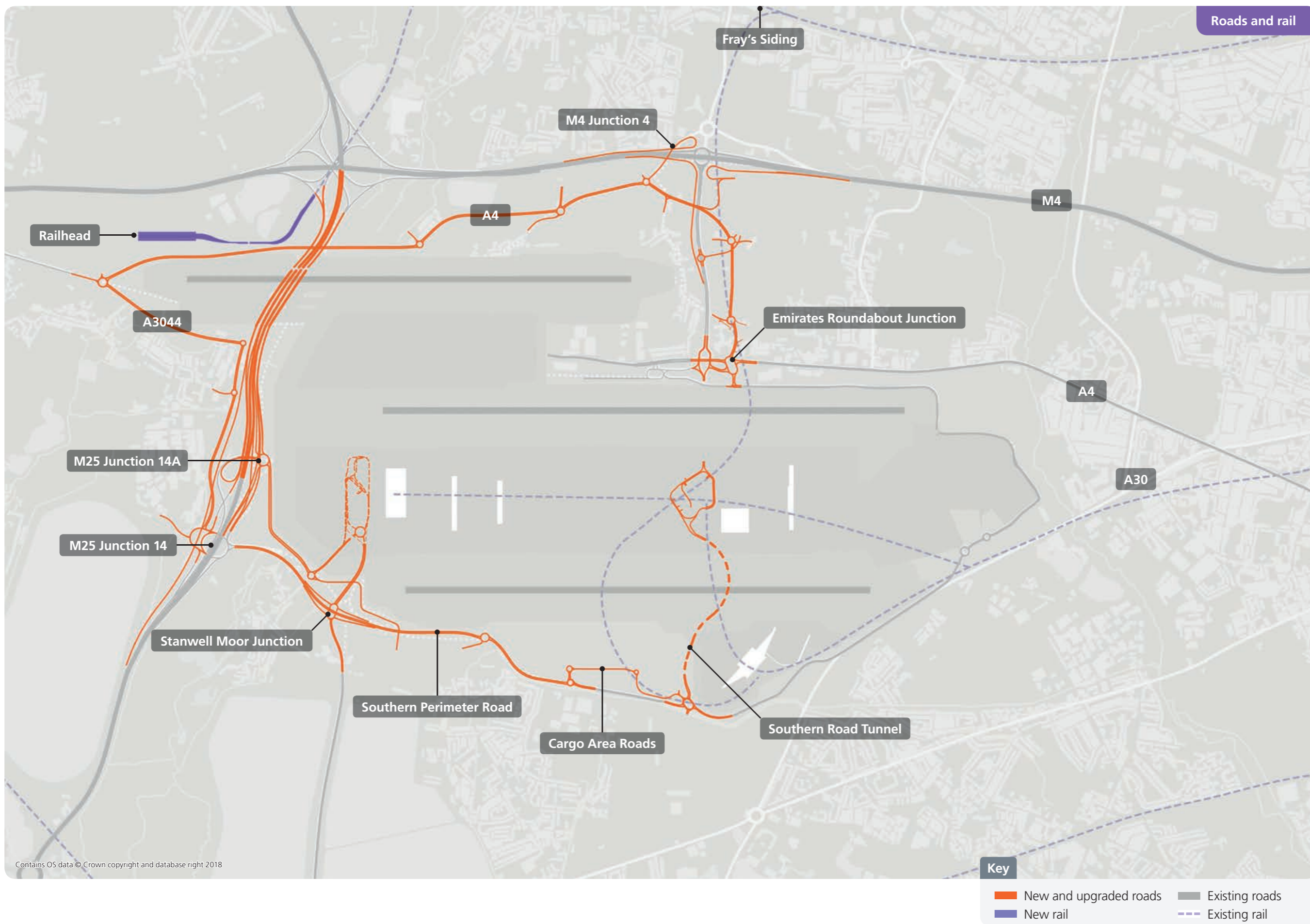
Other works proposed include additional connections onto the Great Western Mainline to allow for more flexibility on train paths from both east and west.

In addition, Heathrow is supporting and has safeguarded the on airport development needed for both Western and Southern Rail to directly serve the airport.

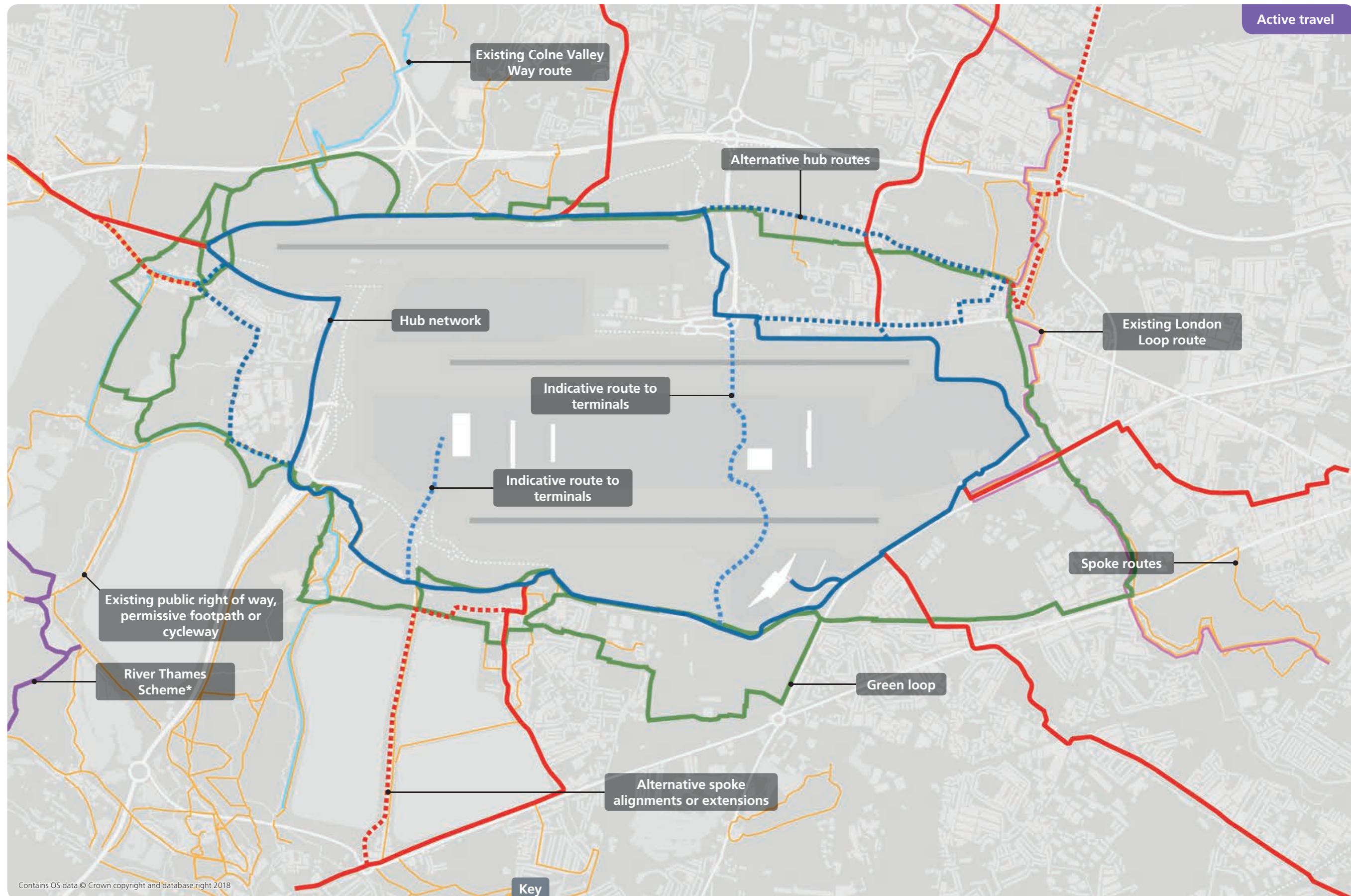


For further information please see the **Surface Access Proposals** document.

For airport operations, Heathrow's exceptional connectivity will be enhanced by the opening of the Elizabeth line, by HS2 and the upgrade of the Piccadilly Line.



Contains OS data © Crown copyright and database right 2018



Contains OS data © Crown copyright and database right 2018

Key							
	Hub network		Spoke routes		River Thames Scheme*		Existing Colne Valley Way route
	Alternative hub routes		Alternative spoke alignments or extensions		Existing public right of way, permissive footpath or cycleway		Existing London Loop route
	Indicative routes to terminals		Green Loop				

* The Environment Agency plans for a flood alleviation scheme in the Thames south of Heathrow are well known to us. We are discussing how our landscape plans can be integrated with theirs to enhance connectivity and overall benefit of the two neighbouring schemes.

3.4. Active travel

Today, there are few facilities for walking and cycling around Heathrow. With over 19,000 of our colleagues today (or 26% of the Heathrow workforce) living within 5km of the airport, there is potential for increasing the proportion of our workforce choosing to walk or cycle to the airport in the future, with the associated health benefits this would bring. This forms an important part of our Surface Access Proposals and has informed the layout of our Preferred Masterplan.

Our aim is to better connect areas around Heathrow with the airport and employment locations around it. As part of this, we are proposing to create a 'green loop' which will support the wellbeing of our colleagues while helping the airport meet our sustainability objectives, including:

- Creating cycle infrastructure which separates people on bikes from faster-moving traffic
- Improving road crossings to ensure that major roads and junctions do not stop people cycling from nearby communities to the airport
- Creating links to local communities, making short, local journeys much easier on foot and by bike

This network of active travel routes will be developed in consultation with local authorities. It will be integrated with existing walking and cycling routes, proposed schemes for improved walking and cycling routes being promoted by other organisations, our proposed green loop around the airport and diverted and improved highways close to the expanded airport. These improvements will not just serve the airport, they will significantly enhance sustainable connections for local communities.



What is the green loop?

The Green Loop is a proposed, roughly 20km route around the airport made up of existing and proposed footpaths and cycleways. It can help to connect open spaces, communities and populations of wildlife.

Feedback from previous consultations

Feedback received at our Airport Expansion Consultation One in 2018 suggested improving cycling facilities, routes and safety for our colleagues and our local communities, as well as the need for a good, pleasant walking environment around the airport.

We have responded to this feedback through our proposals for a Green Loop. This will benefit our local communities and our colleagues by making it easier to cycle and walk around the airport.

3.5. Water environment

The expansion of Heathrow will extend the airport into the Colne Valley, affecting the routes of a number of watercourses and areas of existing floodplain. We plan to address our effects by creating opportunities for significant enhancements.

Our proposals seek not only to protect the quality of the water environment but also ensure no increase in flood risk for local communities.

River diversions

Several rivers and smaller streams will need to be diverted, realigned or bridged.

There will be no diversions of the River Crane.

Wraysbury River, River Colne and Bigley Ditch

The Wraysbury River, River Colne and Bigley Ditch will join together north of Harmondsworth Moor and pass under the airfield in one channel through a covered river corridor to the east of the existing M25. South of Bath Road, the Wraysbury River will split from the River Colne and travel west under the existing and new M25.

The River Colne will pass under the Southern Perimeter Road before connecting back to its existing channel north of Stanwell Moor.

The Duke of Northumberland's River and Longford River

The Duke of Northumberland's River will be combined with the Longford River and will pass under the airfield in one channel through a covered river corridor parallel to the combined Colne/Wraysbury channel.

The Colne Brook

The Colne Brook will be diverted around the northern side of the Thames Water sewage treatment works and the northern and western side of the railhead/logistics centre, before returning to its existing channel north of Colnbrook village.

Flood storage

Without mitigation, expansion will result in the loss of flood plain in the catchment of the River Colne and Colne Brook. We are committed to ensuring that no homes or businesses are at greater risk of flooding because of the Project, so we will replace the lost flood storage to achieve this.

Flood defence works will also be carried out on the channels through Colnbrook village to manage the risk of flooding.

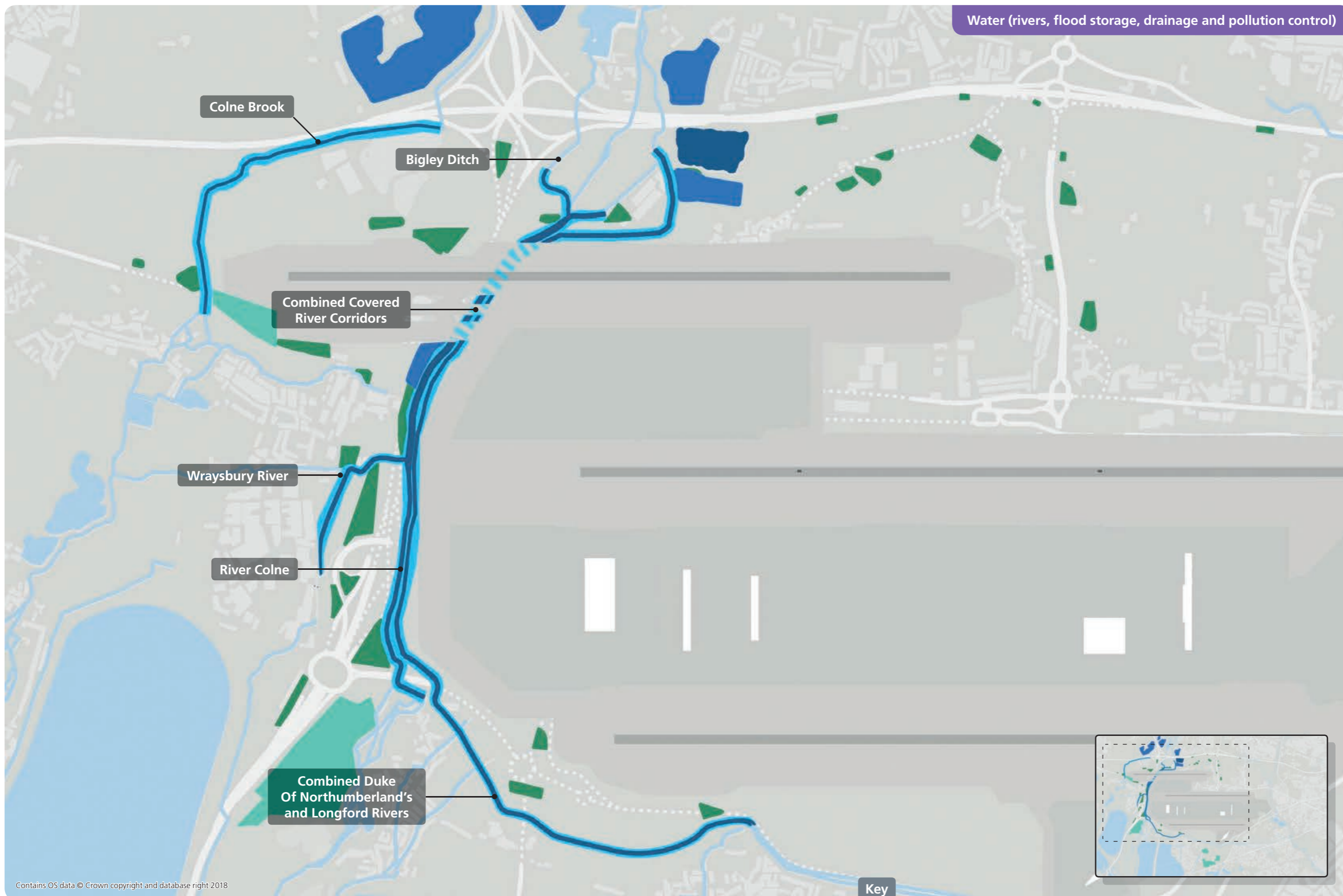
Drainage and pollution control

Flood storage and water quality treatment areas will be put in place.



For more information on how we plan to manage our effect on the water environment please see **section 7.11** of this document.





Contains OS data © Crown copyright and database right 2018

3.6. Airport supporting development

Heathrow supports - and is served by - a wide range of operational and commercial facilities within and around the airport, as well as in the wider economy.

Expansion provides an opportunity to improve and consolidate some of these facilities and generate jobs and benefits for local communities. Some of these facilities will be directly affected by expansion whilst others would grow in response to the demand that will be generated by more flights, passengers and cargo. In particular, expansion will double the cargo capacity at the airport, building on Heathrow's current position as the biggest port by value for markets outside the EU, responsible for over 35% of UK exports to these countries.

Cargo and freight forwarding

Growth in international trade is vital for our economic future, but our existing cargo facilities will not support this growth.

We are proposing to double our existing cargo capacity by redeveloping and expanding the existing cargo handling facilities to the south of the Southern Runway. Our Preferred Masterplan also proposes additional freight forwarding warehouses in a consolidated cluster immediately south of the airport with easy access to the cargo hub.

Locating these facilities to the south of the airport with enhanced access to the M25 will limit unnecessary trips around the airport, supporting our environmental commitments and minimising effects on local communities. We propose a new truck park to the northwest of Stanwell Moor junction to reduce the risk of congestion in the cargo area and to allow us to prevent HGVs parking up in residential areas.

Aircraft maintenance

Aircraft Maintenance will continue in its current location in the eastern area of the airport, and in the northern apron near the T5X North.

Hotels and offices

New hotels will be constructed to replace existing hotels displaced by expansion and to meet the needs of additional passengers. Well located hotels are essential to the operation of the airport – our work has focussed on finding sites for new hotels with immediate or easy access to the terminals but also in locations well served by public transport to reduce the number of journeys made on local roads to the main terminal areas. Hotels are planned in the Central Terminal Area (CTA), next to Terminal 5, at Hatton Cross and immediately south of the Northern Parkway.

The Preferred Masterplan also includes proposals for office space within the CTA and at Hatton Cross, along the public transport spine.



Airport supporting development



Contains OS data © Crown copyright and database right 2018

Key	
■ Airport operations	■ Cargo
■ Industrial	■ Freight forwarding
■ Maintenance	■ Hotel and offices

3.7. Parking

Expansion provides the opportunity to transform how passengers and colleagues travel to and from the airport. Managing our car parking is an important part of how we plan to meet our pledge for no more airport related road traffic, the Airports NPS policy on modal shift and how we will also ensure that the airport's impact on local air pollution does not delay the UK's compliance with EU air quality limits.

Heathrow currently has a number of surface level car parks within and around the boundary of the airport which don't make best use of the land and which require bus connections to terminals and other areas. Our commitment to sustainable growth means that we propose no significant increase in parking at the airport despite the scale of growth and we plan to minimise the use of land given over to parking by consolidating parking provision in new Southern and Northern Parkways.

In response to feedback received at Airport Expansion Consultation One, we have adjusted our proposals for parkways to enhance their design and minimise their effects on local communities. Construction costs and a high water table mean that we are not proposing below ground car parking.

The Northern Parkway

The Northern Parkway will be close to the M4 and will have capacity for up to 24,000 spaces. It will serve the Central Terminal Area via direct shuttle services.

The Southern Parkway

The Southern Parkway will have capacity for up to 22,000 spaces. It will connect to the M25 and serve the Terminal 5 campus of the airport with direct shuttle services connecting straight into Terminal 5.

Both Parkways will be accessible by our enhanced pedestrian and cycle network and provide local communities with direct access to the airport and its facilities.



For more information on our pledge for no more airport related traffic please see **section 6** of this document.

Terminal 4 multi-storey car park

We also propose to consolidate car parking around Terminal 4 with up to 6,500 spaces in a new multi-storey building to the south of the terminal.

The multi-storey building will accommodate car rental, authorised vehicles and taxi parking areas.

Long stay passenger and colleague parking will be relocated to an enlarged parking area at the east end of the southern runway.

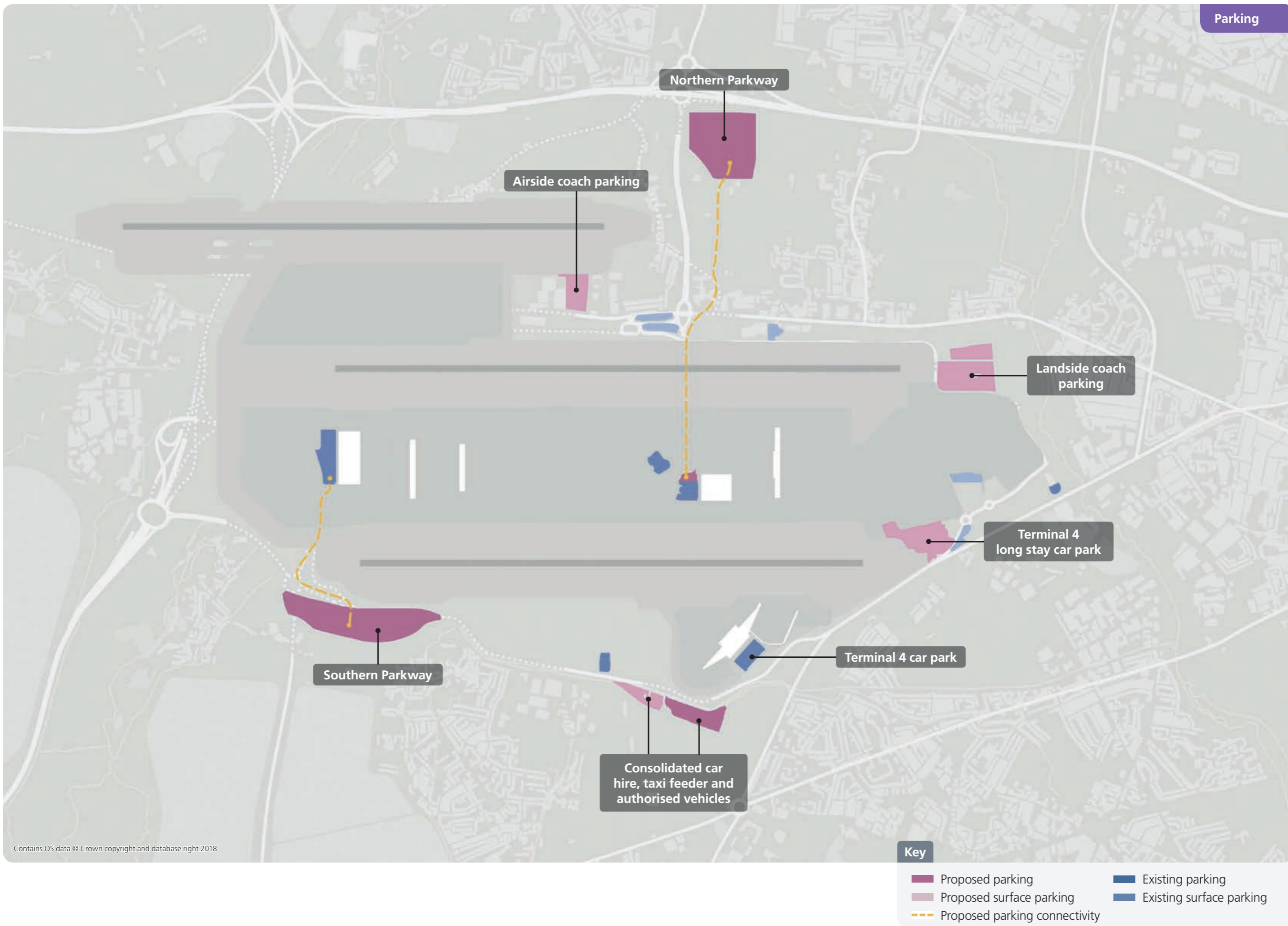
Feedback from previous consultations



In response to feedback received at Airport Expansion Consultation One, we have adjusted our proposals for parkways to enhance their design and minimise their effects on local communities. Construction costs and a high water table mean that we are not proposing below ground car parking.

Illustrative visualisation of Southern Parkway





3.8. Displaced land uses and community facilities

The expansion of Heathrow will affect a number of existing non-residential buildings and community facilities which are currently located in the area we plan to develop for the new runway or areas needed for associated infrastructure or environmental mitigation.

We will work with displaced businesses and community facilities to identify suitable alternative locations that meet their needs. Where it is not possible to identify a suitable alternative location, we will provide appropriate compensation.

i For more information, please see **section 10** of the **Property Policies Information Paper**.

Major land uses

The existing Immigration Removal Centres at Harmondsworth and Colnbrook need to be relocated prior to the construction of the new runway. Heathrow has undertaken a detailed site selection process and four potential sites were considered for this relocation in Airport Expansion Consultation One.

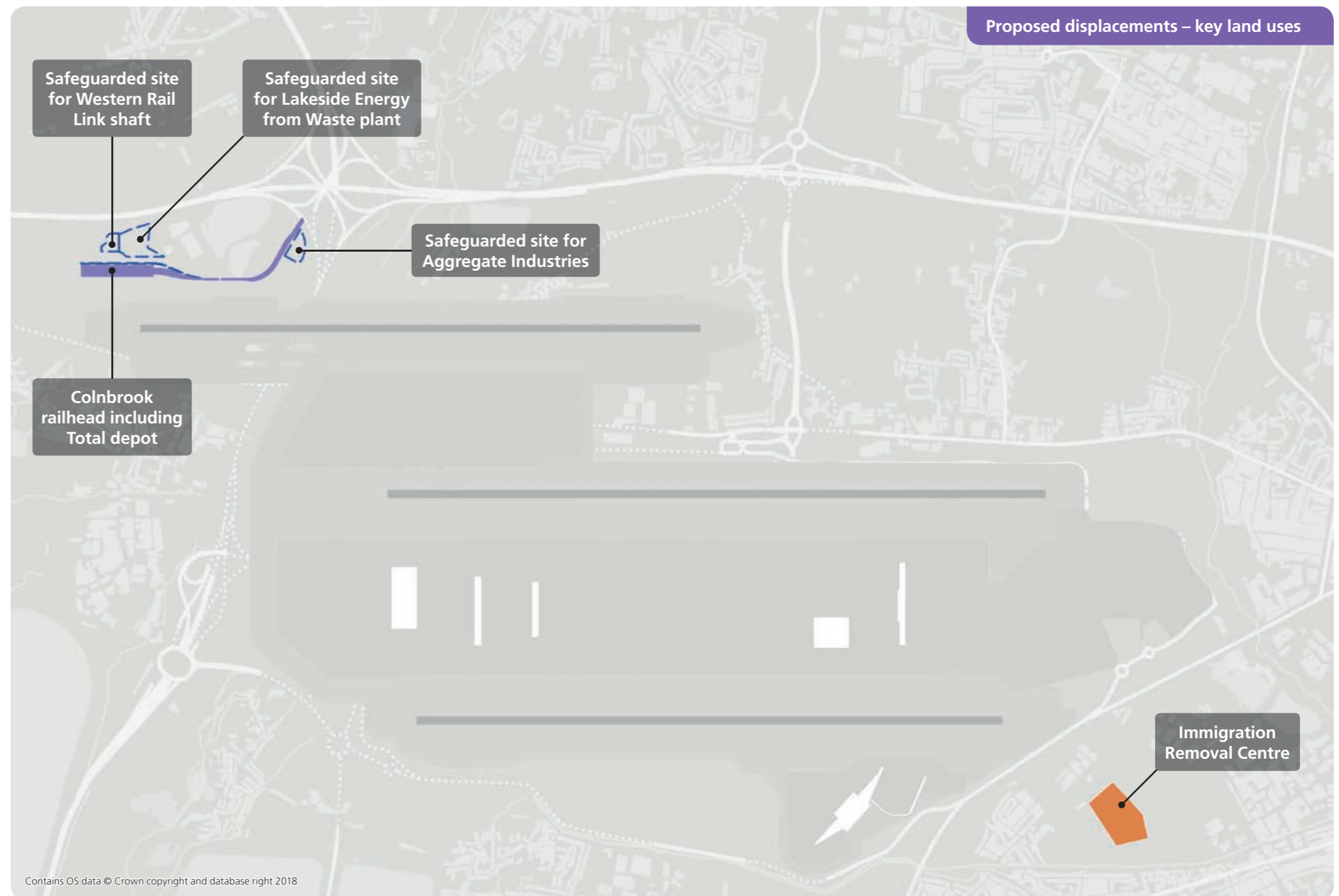
Following further engagement with the Home Office and the London Borough of Hounslow a site at Faggs Road between Bedfont and Hatton has emerged as our preferred location, but Mayfield Farm also remains a potential option.

Other major land uses displaced by the new runway include the Total Rail Head, Lakeside Energy from Waste facility, Aggregate Industries' asphalt plant and British Airways' Waterside offices.

The Total Rail Head facility will be re-provided north of the new runway and west of the M25. This facility will sit alongside the relocated Colnbrook railhead, which will be diverted and realigned in an east-west

direction north of the new runway to enhance rail access to the airport for construction and other bulk materials.

Lakeside Energy from Waste facilities, Aggregate Industries' asphalt plant and British Airways' Waterside offices are likely to be re-provided by separate planning applications outside of our DCO application.



Community facilities

We want to grow sustainably, working with our local communities and stakeholders to reduce our effects and deliver benefits that meet their needs.

A number of community facilities will be affected as part of the Preferred Masterplan. Where possible, we have tried to avoid loss or disruption. Where this is unavoidable, we have developed plans to relocate facilities in carefully chosen locations where they might best serve their communities.

Community engagement will continue to help us plan for the facilities that will need to be relocated:

Harmondsworth Primary School

Harmondsworth Primary School will be displaced by the new runway. Land to the north of the M4 on Stockley Road has been identified as a suitable site for a new school as it is within the school's catchment area with good access for the community and good connections to green areas.

Heathrow Special Needs Centre

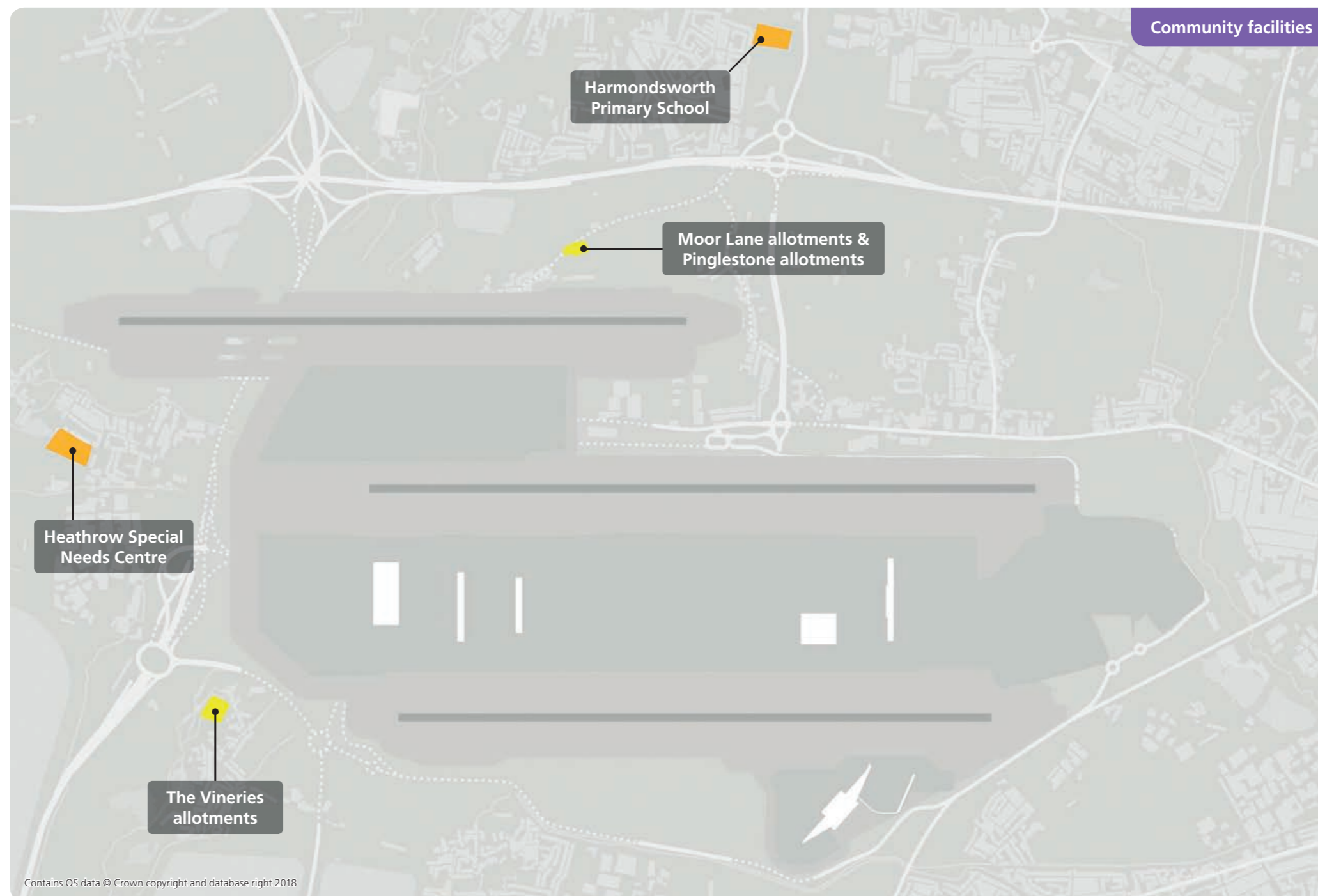
Heathrow Special Needs Centre will be re-provided at a new location immediately west of Poyle. The proposed site was selected as it provides a similar area of land, is located close to the current facility and has good access to public highways and public transport routes.

Allotments

Three areas of community allotments will be displaced; Stanwell Moor allotments, Moor Lane allotments in Harmondsworth and Pinglestone allotments in Sipson. These will all be re-provided as part of our proposals at locations close to the existing sites.



Please see the **Heathrow Expansion and Your Area** documents for more information on our approach to existing buildings and community facilities.



3.9. Landscape

Heathrow expansion provides the opportunity for positive change in the landscape around the airport. Our Landscape Strategy is driven by the ambition of Heathrow to become one of the most sustainable airports in the world, and to become a great place to live, work and travel.

To achieve this, our Landscape Strategy encompasses three core themes to deliver a smarter, brighter and greener Heathrow.

Green Loop and open spaces

We are proposing a Green Loop which is a roughly 20km route around the airport, made up of existing and proposed footpaths and cycleways which join up with additional routes and landscapes.

The Green Loop connects open spaces, communities and functions as a wildlife corridor in places.

Green and blue Infrastructure

Heathrow sits between the natural floodplains of the Colne Valley and Crane Valley, which form corridors made up of woodland, meadows, wetlands and watercourses connected with the wider landscape linking the Chilterns with the River Thames.

Our proposals include reclaiming former landfill sites, increasing tree planting, providing flood storage areas and improving accessibility to the countryside. This will create enhanced, better connected and more resilient blue and green infrastructure, to improve the visual landscape and public green spaces for our local communities.



For more information on our landscape strategy and these themes, please see **section 4.7** of the **Preferred Masterplan** document.

The airport boundary

Where affected by our expansion proposals, the boundary of the airport will be carefully designed to improve the overall appearance of the airport and help it integrate into the surrounding area.

To the west and south the relocated rivers will create a natural edge between the airport and the M25.

In the north, a large earth embankment may combine noise mitigation and visual screening.

To the south, the boundary will include airport supporting developments such as hotels, offices and cargo facilities.

Green and blue infrastructure refers to the aspects of the landscape that could form a green-blue network. The green landscape is made up of aspects such as hedgerows, woodlands and fields whereas the blue landscape is linked to water such as ponds and lakes.

3.10. Utilities

The expansion of Heathrow will affect a number of existing utilities which need to be diverted or relocated. Extra facilities will also be needed to support the growth of the airport and the infrastructure that will be delivered.

This is common for major developments and we have been engaging with key stakeholders to minimise disruption and plan timely and efficient re-provision.

Electricity and other utilities

The existing overhead powerlines at the western end of the new runway will need to be removed and diverted underground.

Longford substation will be relocated to a site to the west of the Colnbrook rail branch line and north of the A3044.

Other utility routes affected, such as the Bath Road Sewer, will be diverted in consolidated utility corridors along routes which minimise effects on existing infrastructure and local communities.

Fuel

Aircraft fuel is currently stored at the Perry Oaks site, within the existing airport boundary. Four additional fuel tanks are proposed for this facility. Further fuel capacity will be located between the existing and proposed northern runways.

Water

Two options are being considered to deal with waste water generated by an expanded airport. Our preferred option is to send it to the Thames Water Sewer and this is under review with Thames Water.

An alternative is to provide a new Waste Water Treatment Plant. This will need to be distant from residential properties due to risk of odour. A site north of Holloway Lane and south of the M4 has been identified for this in our Preferred Masterplan.



3.11. Phasing the expansion of Heathrow

In this section we set out our current thinking on when the different aspects of Heathrow's Preferred Masterplan could be developed and delivered over time.

At each phase, we set out the infrastructure that will be required to accommodate estimated passenger numbers (million passengers per annum, or mppa).

The phasing shown is indicative and represents key snapshots in time; the speed of delivery of infrastructure could be affected by changing passenger demand, affordability or other factors.

We have phased our proposals as follows:

- **Phase 0 – up to around 2026:**

As part of our application to expand Heathrow, we propose that some of the extra flights, which could be up to 25,000 additional air transport movements (ATMs) per year, are introduced early on our existing two runways prior to our proposed third runway being brought into operation



For more information on this please see **section 5.4** of this document and the **Early Growth** document.

- **Phase 1 – around 2026:**

Represents the anticipated date when the proposed new runway becomes operational

- **Phase 2 – around 2030:**

Represents when the airport reaches approximately 115mppa. The Airports NPS sets out that this is when half of journeys to and from the airport should be made using public transport

- **Phase 3 – around 2035:**

Represents when the airport reaches approximately 130mppa and approximately 740,000 ATMs



Illustrative visualisation of the masterplan

- **Phase 4 – around 2050:**

Represents when the airport reaches approximately 142mppa and approximately 756,000 ATMs. This represents the point at which the Preferred Masterplan will be substantially complete.



For more information on the phasing of our Preferred Masterplan, please see **section 8** of the **Preferred Masterplan** document. Details of our proposed phasing for construction are provided in **section 4** of this document and the **Construction Proposals** document.

The following pages provide an explanation of how we currently envisage the phased expansion of the airport will take place.

Phase 1 – around 2026 (Opening day)

The new runway and taxiway connections will have been completed. The M25, A4, A3044 and river corridors affected by the runway will have been diverted and road access to Terminal 5 from the M25 will be relocated to the south.

The Colnbrook Rail Head will have been realigned and will continue to be used to transport construction materials needed for the Project and aviation fuel.

The Immigration Removals Centre and other displaced development such as freight forwarding facilities and hotels will have been re-provided.

The Northern Perimeter Road will still be operational, as will many of the existing land uses along it. Sites along Bath Road, such as the Regus offices and Thistle and Premier Inn Hotels, and the existing car parks in this area will also be operational.

Drainage and pollution control measures will be operational to drain and treat the surface water run-off from the new runway and taxiway areas to protect our local rivers and streams.

The multi-storey car park on the existing Terminal 4 long stay site will be complete.



Phase 2 – around 2030 (approximately 115 mppa)

The first phase of the new Terminal 5X will be open.

The first phase of the new Terminal 5X will be open. T2A Phase 2 will also have been delivered.

The Northern Perimeter Road parking areas will still be operational, however some of the spaces currently serving Terminal 5 will be reallocated to serving Terminal 2.

To make up for the loss of parking spaces assigned to Terminal 5, and to serve the increase in passenger capacity, half of the Southern Parkway will be built and operational.

New and improved road infrastructure in the south of the airport, consisting of works to Stanwell Moor Junction and the Southern Perimeter Road, a new landside link road through the cargo area, and a new southern road tunnel to the Central Terminal Area, will also be constructed.



Phase 3 – around 2035 (approximately 130 mppa)

Additional phases of Terminal 5X will have been built, including a northerly extension.

The first section of the Terminal 5X North northern satellite will be operational, with additional aircraft stands and taxiways.

The Southern Parkway will be fully built. The Northern Parkway will be in use as a surface level parking area for the Central Terminal Area to replace some of the parking areas lost due to the closure of the west end of the Northern Perimeter Road.

Improvements to M4 Junction 4 and new roads from the diverted A4 will provide access to the Northern Parkway.



Phase 4 – around 2050 (approximately 142 mppa)

Terminal 5X and satellite T5X North will be fully built.

The area where the Central Terminal Area is today will also be fully developed. There will be a full Terminal 2 northern extension, a new T2C satellite and the T2D satellite with remote aircraft stands.

A new aircraft hangar will be provided within the existing maintenance base area.

The Northern Parkway will be fully developed with multi-storey car parking buildings to serve the expanded Terminal 2 campus.

Additional taxiways will be added to access and exit the runways to improve airfield performance.

As construction demands reduce in the railhead area, surplus land will be reused to accommodate increasing airport supporting development, avoiding the need to take additional land.

Your views



We want to know what you think about:

- any specific parts of our Preferred Masterplan or the components that make up the Preferred Masterplan
- the sites we have identified for buildings and facilities we are proposing to move
- our boundary design proposals to manage noise and the effects on views around the boundary of the expanded airport
- our development proposals and the measures proposed to reduce effects in the areas identified in the **Heathrow Expansion and Your Area** documents
- the legal powers and constraints on development that should be contained in our DCO

Please see **section 14** of this document for specific questions.



Contains OS data © Crown copyright and database right 2018



4. Construction

We recognise that the construction and operation of an expanded airport will affect the day to day lives of local people. There will be some negative effects but also some positive ones. We take seriously our responsibility to those around us to minimise the potential negative effects of expansion during and after construction.

This section explains our construction activities, how we propose to schedule and manage them to minimise effects, and the sites we think we will need for construction.

As with our Preferred Masterplan, our proposed approach to construction has been informed by engagement with the Heathrow Strategic Planning Group, which represents many of the local authorities surrounding the airport.



For more detailed information on how we propose to construct an expanded Heathrow, please read the **Construction Proposals** document.



4.1. Indicative construction programme

We have developed a programme for the construction of our Preferred Masterplan to be delivered in the four phases of development explained in **section 3** of this document.

The exact timings and the order of development will depend on the demands and needs of our passengers and airlines in the future.

Anticipated early works

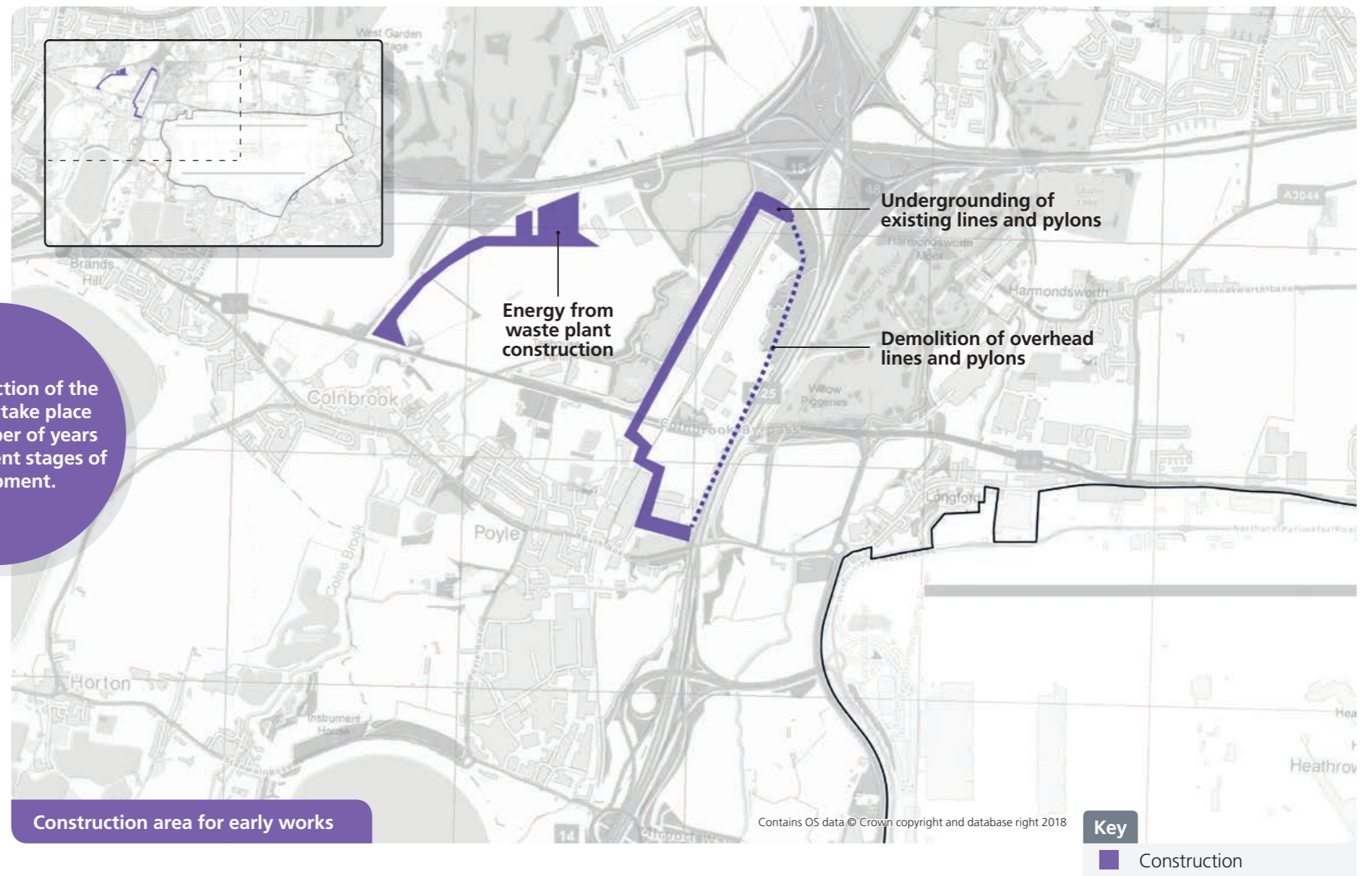
Before the main construction works begin, and ahead of the decision on our DCO application, we expect to carry out a number of early works. We currently anticipate that these works will take place in 2020 and 2021. These are expected to include the undergrounding of overhead power lines and some activities to reduce our environmental effects. All of these will be subject to the necessary planning approvals.

We also expect some non-Heathrow developments to be constructed during this period, including the proposed replacement Energy from Waste plant.



This section should be read alongside **section 3** of this document. For more detail please refer to the **Construction Proposals** and **Preferred Masterplan** documents. For more information on the construction activities proposed in your local area please see the **Heathrow Expansion and Your Area** documents.

The construction of the airport will take place over a number of years across different stages of development.



DCO approval to runway opening (2021 to around 2026)

To deliver Phase 1 of our Preferred Masterplan

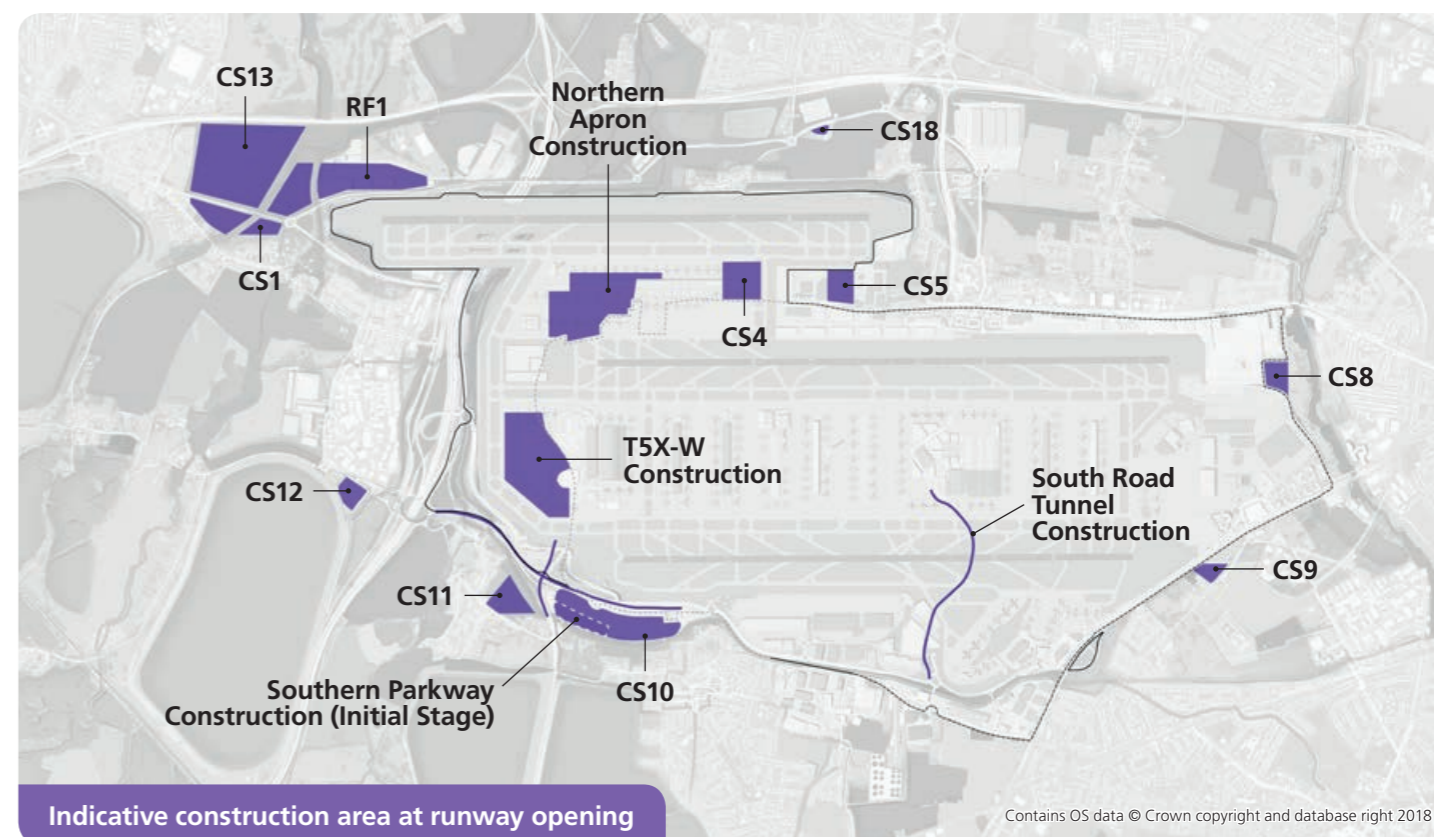
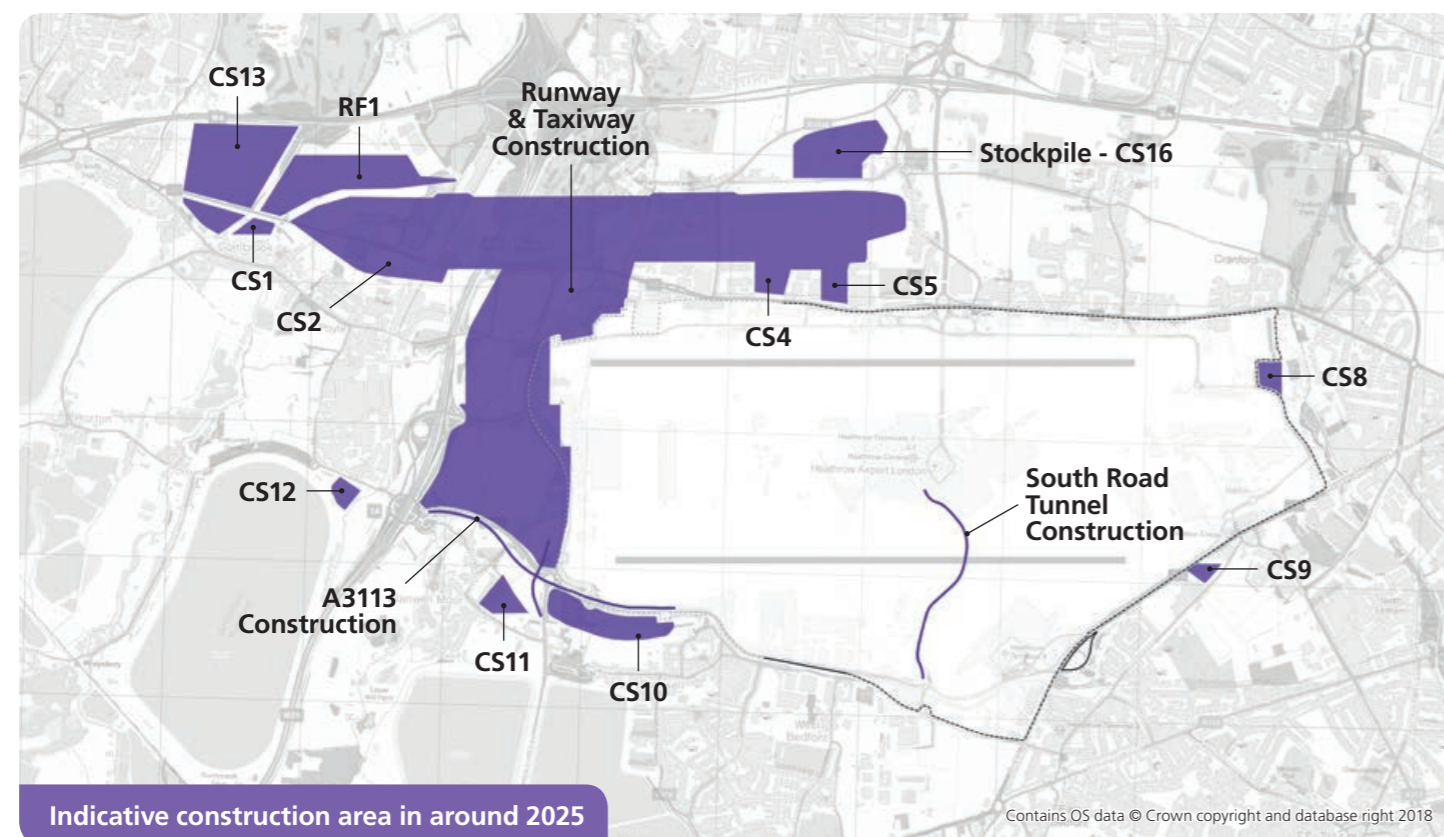
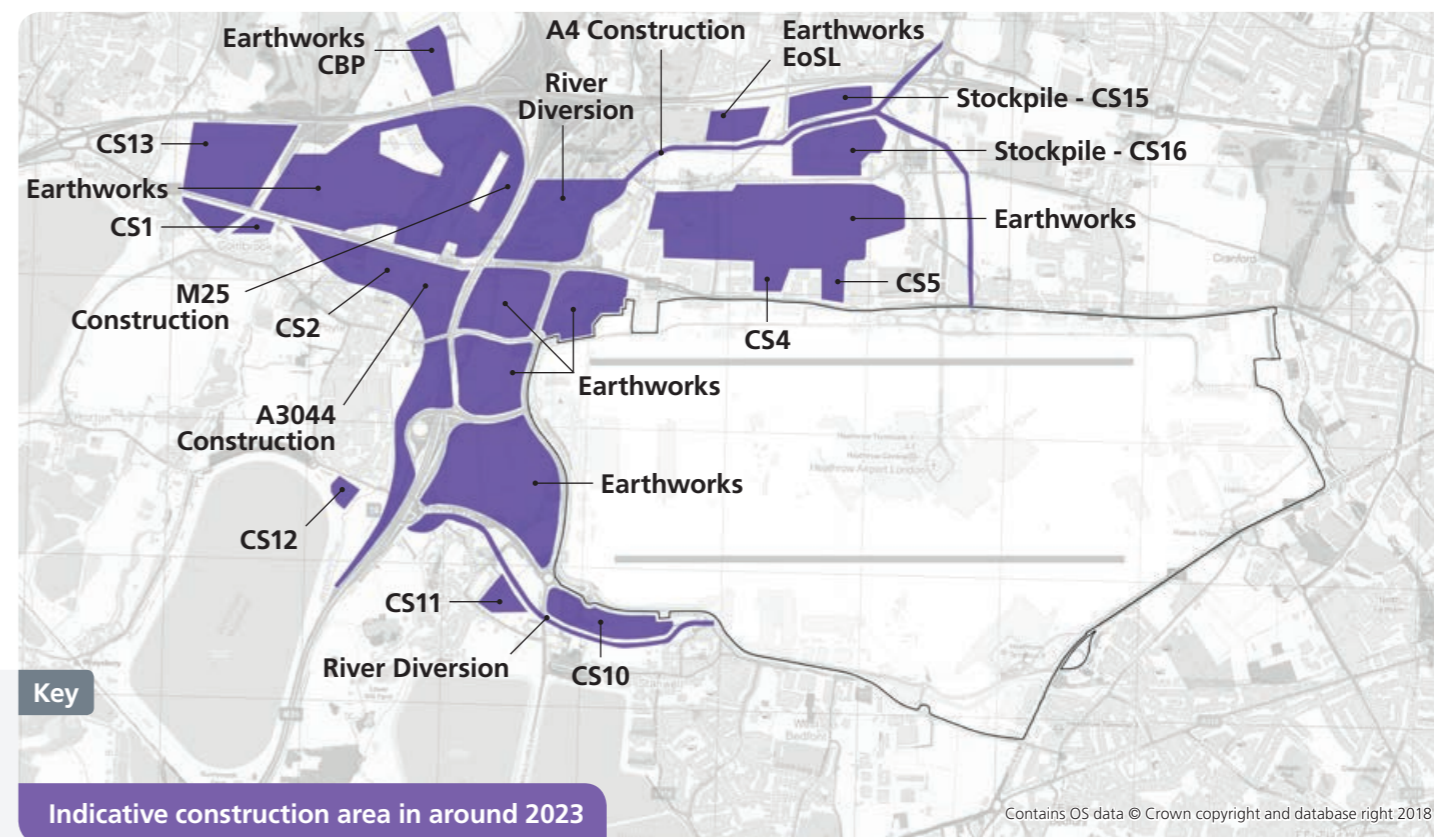
If our application is successful we expect to be granted development consent in late 2021 and construction of the main works will start soon after. This is expected to involve roughly five years of construction.

Construction activities will include removal of existing buildings and structures, the re-provision of some commercial and industrial properties and re-routing of gas, electric and water supplies.

There will be earthworks, which involves excavating materials and moving them from one location to another to help raise or lower the level of land.

We intend to use as much suitable material arising from the earthworks as possible within the development site so that we can reduce the need to import or export large quantities of material.

Ahead of the runway opening there will also be construction work to realign rivers, build the new runway and airfield and create areas of landscaping and open space.



From runway opening (around 2026) to approximately 115 mppa (around 2030)

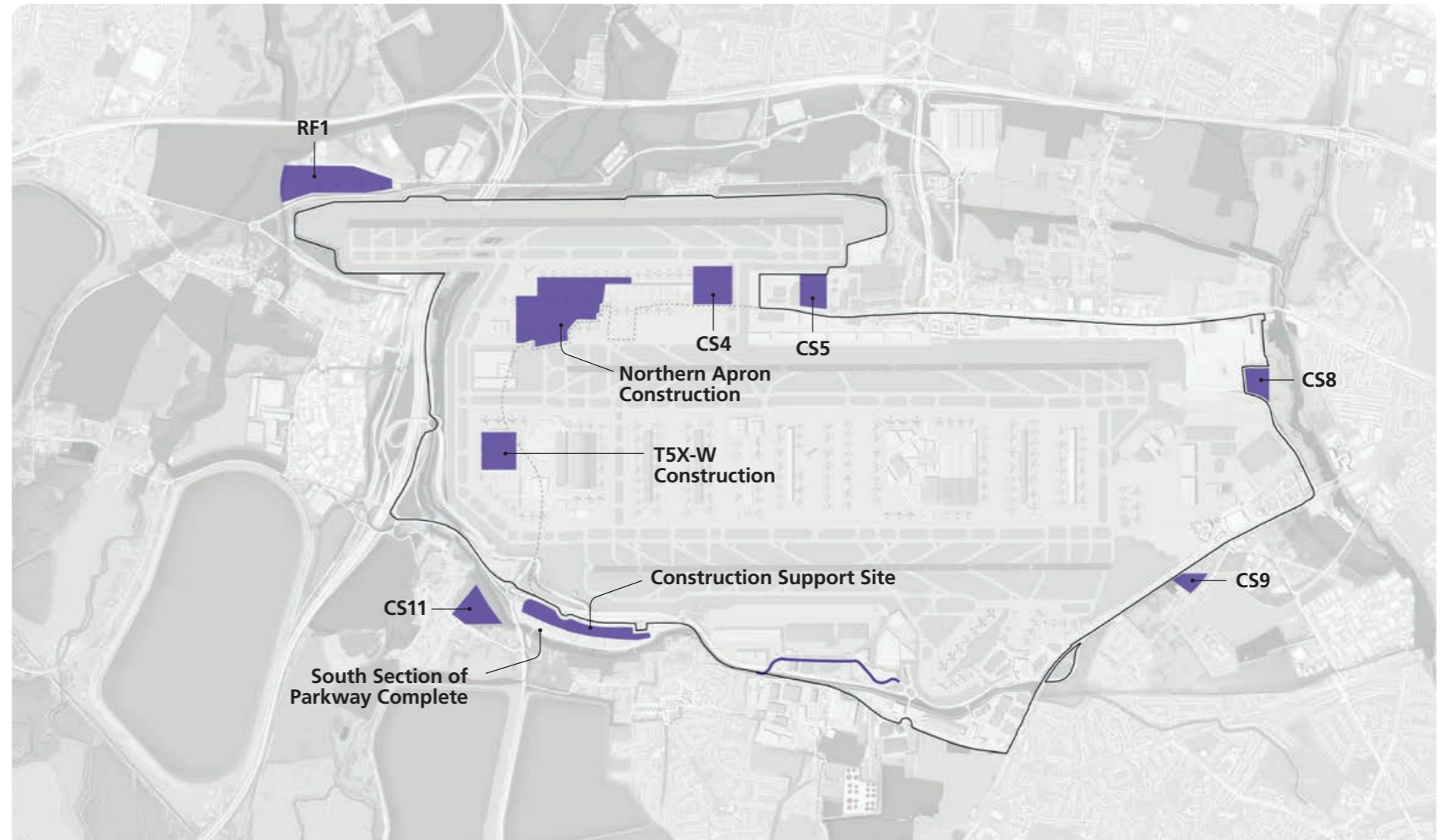
To deliver Phase 2 of our Preferred Masterplan

Once the new runway is open, most construction activities to the north and west of it will be complete. Activity will increasingly be consolidated within the expanded airport boundary, which will reduce disruption for communities.

Construction activities will include ongoing development of Terminal 5X and Terminal 2A and their supporting infrastructure, and the realignment of the A3113 and Stanwell Moor Junction.

We will construct the initial phase of the new Southern Parkway and the Southern Road Tunnel, connecting the south of the airport with the Central Terminal Area.

We will also create new aircraft stands between the new runway and the central runway and will decommission the Construction Support Sites to the north west of the new runway, except for the railhead.



Indicative construction area at 115 mppa (around 2030)

Contains OS data © Crown copyright and database right 2018

Key
 CS Construction Support
 ■ Construction

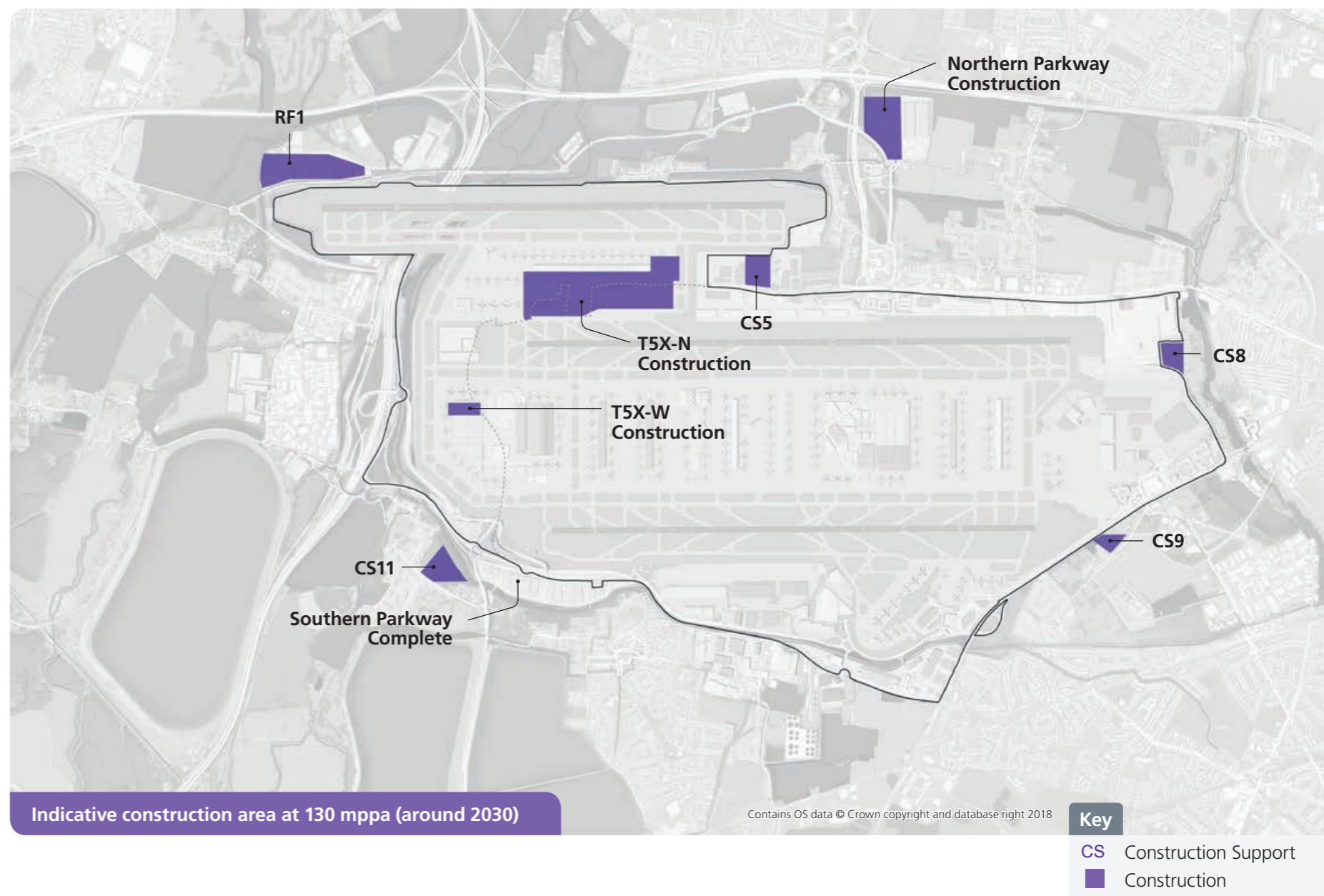
From approximately 115 mppa (around 2030) to approximately 130 mppa (around 2035)

To deliver Phase 3 of our Preferred Masterplan

Construction activities will be mostly located within the airport.

The construction activities will include the ongoing development of Terminal 5X and the development of the northern apron and Terminal 5X North, as well as the removal of a section of the A4 and existing facilities.

It will include development of surface parking and changes to the roads around the Northern Parkway and continuing work on expanding the Southern Parkway, reducing number of vehicle trips around the airport roads as we consolidate our parking facilities.



From approximately 130 mppa (around 2035) to approximately 142 mppa (around 2050)

To deliver Phase 4 of our Preferred Masterplan

Construction activities will continue to remain mostly within the airport.

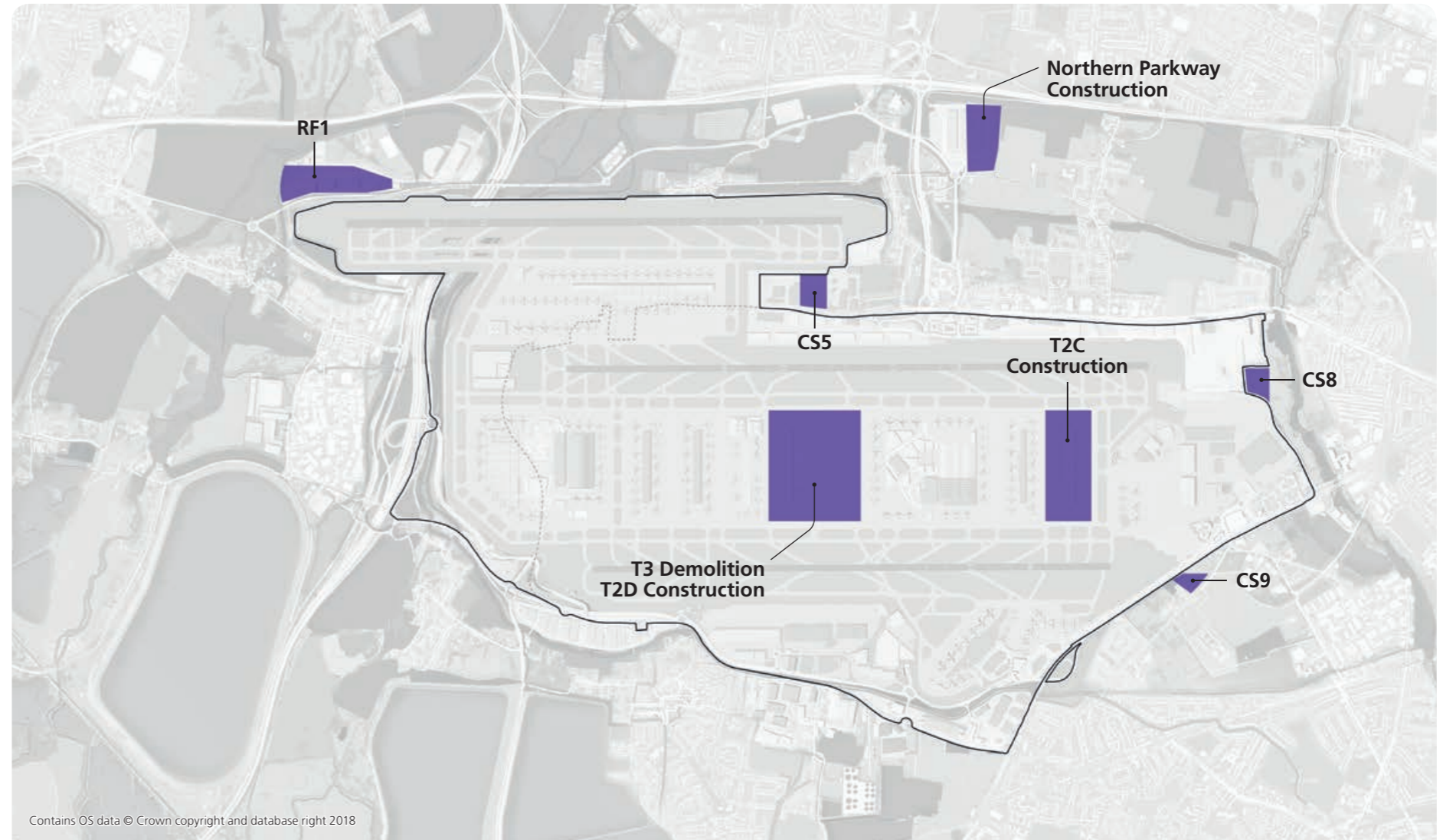
Construction activities will include completion of the last phase of Terminal 5X, the second phase of Terminal 5X North and associated taxiways and the construction of Terminal 2C and Terminal 2D satellite and stands. They will also involve the demolition of Terminal 3 and completion of the Northern Parkway.

Construction method

In **section 4** of our **Construction Proposals** document we set out our current proposed construction methodology and information on the different construction activities we will need to carry out to build our Preferred Masterplan. These activities have been grouped into the following areas; demolition of properties, construction of new infrastructure, airfield expansion (including earthworks), and campus development.

Our proposed construction methodology has also been used for assessments in the Preliminary Environmental Information Report (PEIR).

i For more information please refer to **section 4** of the **Construction Proposals** document and the **PEIR NTS**. If you want to find out more about how we intend to manage the effects of construction please see the **Draft Code of Construction Practice**.



Contains OS data © Crown copyright and database right 2018

Indicative construction area in around 2040+ to allow us to achieve 142 mppa in around 2050

Key
 CS Construction Support
 Construction

Feedback from previous consultations

During Airport Expansion Consultation One in January 2018 we identified four potential borrow pits, which are sources of material such as sand, gravel and soil needed for construction, to the west of the airfield.

Some feedback expressed concerns and asked us to reconsider these sites. We have responded to this and have identified alternative sites for the borrow pits in response to the feedback. The original sites no longer form part of the Preferred Masterplan.

i You can read more about proposed borrow pit locations in **section 4.3** of the **Construction Proposals** document

4.2. Construction and logistics management

The expansion of Heathrow will require a number of construction projects to take place at the same time, an extensive supply chain and a large labour force.

• Logistics hubs

To spread the economic benefits of expansion across the UK, we plan to build some elements of the Project at other sites, some distance from Heathrow. These sites are called 'logistics hubs'. These do not form part of our proposed DCO but will have an important role in the delivery of Heathrow's expansion.

The logistics hubs will be used to pre-build some parts of the Project before transporting them in consolidated loads to the construction site, reducing the number of vehicle trips that would otherwise be required. The hubs will play a key role in supporting efficient delivery of the Project and are expected to help to reduce the effects of construction on our local communities.

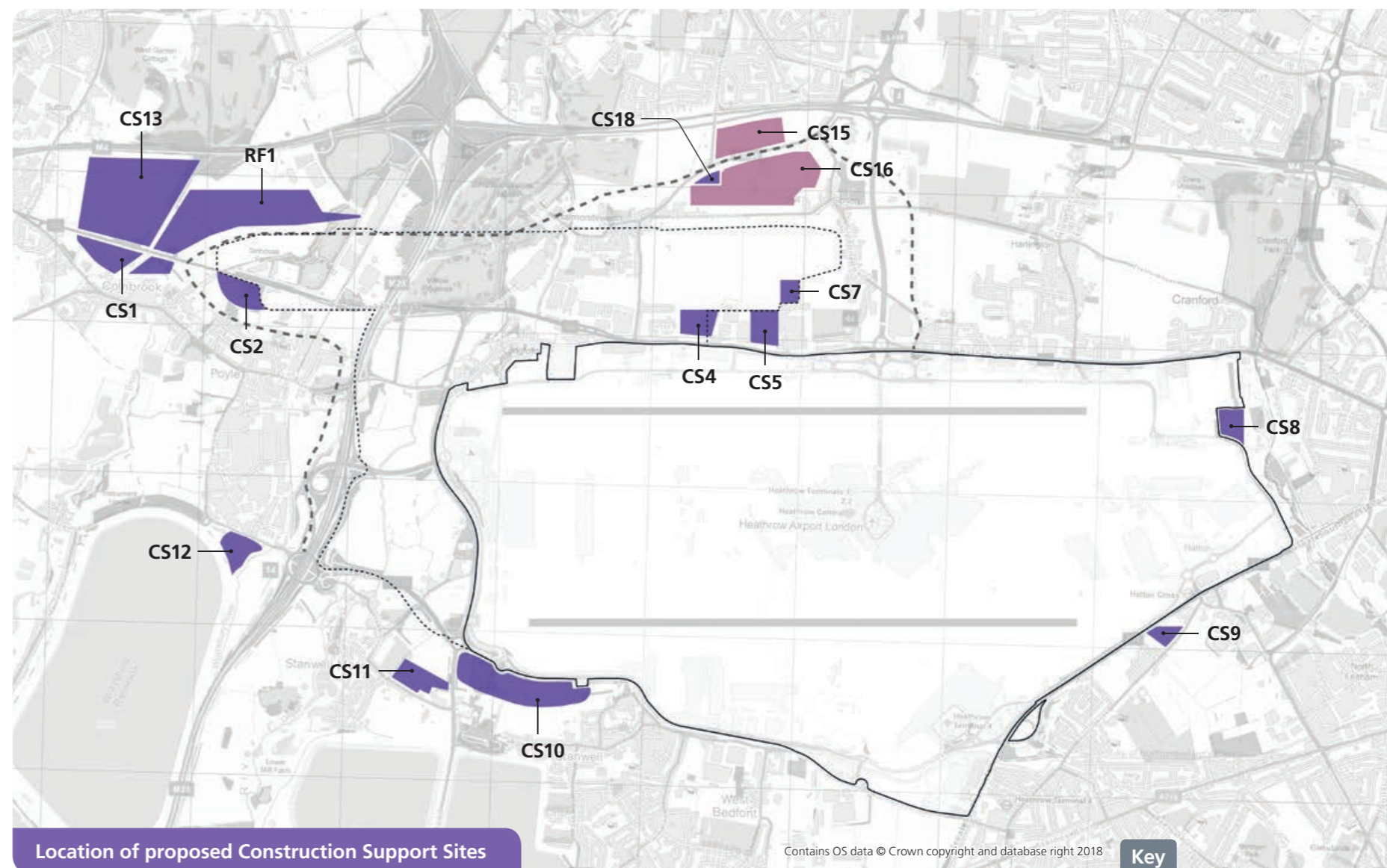
In March 2019 we announced our shortlist of 18 logistics hubs across the UK. These were selected due to their connectivity, skilled local workforce and the strong support for them in their local areas.

Four logistics hubs will be chosen in 2020. These will provide jobs and other economic opportunities in their local areas that could have far reaching benefits.

• Construction Support Sites

We are aiming to keep construction activities within areas of land which we require permanently for the Project. Where this is not possible we have identified areas of land which we will require temporarily throughout the construction phase, known as Construction Support Sites.

To help reduce our effects on the local environment, communities and the road network, Construction Support Sites will be located along main access roads and as close as possible to main construction areas. They will include facilities such as construction compounds, temporary parking and workforce facilities.



Location of proposed Construction Support Sites

Feedback from previous consultations

Following feedback from Airport Expansion Consultation One in January 2018 we have reduced the footprint and number of Construction Support Sites to minimise effects on the communities surrounding the airport.

For example, CS-1 has been split into two working areas either side of a protected corridor for Horton Brook and the eastern boundary has been revised to accommodate an historic walking route.

Site CS-10 has been reduced in size and moved as far north as possible to create a buffer with adjacent residential areas.

Site CS-13 has been reduced in size to provide ecological corridors in the north.

i You can read more about our **Construction Support Sites** in the **Construction Proposals** document and the **Updated Scheme Development Report**.

- **Management of construction traffic**

We will implement a Construction Traffic Management Plan that will include traffic management measures and controls on construction vehicle types, hours of site operation and delivery routes for goods vehicles.

We will also implement a Construction Workforce Travel Plan that will include measures to encourage the use of sustainable travel modes by construction workers.

Initiatives such as these would help to reduce effects on air quality, lower carbon emissions and manage congestion.

- **Construction access and circulation**

We have developed routes for construction traffic which minimise the distance vehicles have to travel on public roads and provided dedicated construction routes away from highways.

For other local roads, such as town and village centres and high streets, access for construction traffic will be restricted but may at times be necessary for practical reasons. We will work closely with our contractors to manage and minimise any negative effects on our neighbours.

- **Separate construction road network**

We will develop a number of temporary roads on site to transport earthworks. These will be used by construction traffic and will reduce our effects on local roads.

- **Managing the construction workforce**

We expect that the majority of our workforce will live within a commutable distance of Heathrow and we are therefore not proposing to provide temporary purpose built accommodation. We do recognise that on other large projects, some of the construction workforce choose to live in their own mobile homes. Therefore, we propose to provide areas for mobile homes within some of the Construction Support Sites.

We may also use some of the accommodation which we need to acquire as part of the Project around the site to house the workforce.

We will develop a Worker Code of Conduct to set out standards of behaviour expected of our workforce towards our local communities.

- **Worksite security**

We will work with our contractors to ensure that security measures are put in place around the site.

- **Temporary utilities**

We will ensure temporary utilities are put in place such as drainage systems for run-off water from construction areas and a sewage system, electrical power and water for the construction workforce. We will put in place permanent utilities as early as possible to minimise the use of the temporary utilities.

- **Temporary buildings and structures**

A range of buildings and structures will be required temporarily to support construction. This will include temporary offices, storage buildings and welfare facilities.

- **Working hours**

Working hours will vary by activity and across different construction sites. Shift start and finish times will be staggered to reduce pressure on local transport services, roads and construction site infrastructure.

24-hour working, seven days a week, including Bank Holidays, will be required for activities directly related to ensuring that the new runway can be operational as soon as possible. In preparation for our DCO application, we will consider construction mitigation proposals to take account of the proposed working hours. We will consider locations and activities where 24-hour working may cause unacceptable effects, and will propose reduced working hours, additional mitigation or activity restrictions in the Code of Construction Practice to be submitted as part of our DCO application where appropriate.



For more information please read sections 5 and 6 of the **Construction Proposals** document and our **Draft Code of Construction Practice (CoCP)**. The draft CoCP also includes the **Preliminary Outline Construction Traffic Management Plan** and **Preliminary Outline Construction Workforce Travel Plan**. Please also read the **Heathrow Expansion and Your Area** documents for more information about construction and our local communities.



4.3. Managing the effects of construction

To help us control and manage the potential effects of construction on local communities, businesses and the environment, we will put in place a Code of Construction Practice (CoCP).

This document will set out the measures and standards we and our contractors have to follow and meet throughout the construction period, and will help ensure a consistent approach to the management of construction activities.

It will set out our plan for continued engagement with communities who are most affected by construction and will also provide contact details should anybody with concerns about the construction process or activities want to get in touch.



For more information please see the **Draft Code of Construction Practice**.

We have developed and are consulting on a draft CoCP which we have discussed with local authorities and other key stakeholders. As well as the measures set out in the CoCP, we will of course comply with legislation and other relevant environmental controls.

Your views



We want to know what you think of our construction proposals and the ways we are proposing to minimise effects on communities and the environment.

Please see **section 14** of this document for specific questions





5. Future operations

This section explains how we propose to operate our runways at a three runway airport. This is summarised here and is set out in more detail in the Future Runway Operations document.

Our approach has been informed by the feedback we have received from our earlier consultations and by engagement with stakeholders and our local communities.

Moving from two to three runways will result in an increase in capacity and the potential to alternate their use to carefully manage our effects on local communities and improve our operational procedures.

In this section we explain our proposals for three aspects of runway operations that we consulted on as part of our Airport Expansion Consultation One in 2018 and our Airspace and Future Operations Consultation in January 2019. We explain them together as a package first before explaining them individually. They are:

- Runway alternation;
- Night flights; and
- Directional preference.

Prioritising respite

Feedback has confirmed that many residents affected by aircraft noise value respite.

Expansion provides new opportunities for runway alternation and opportunities to restrict night time operations to prioritise respite.

We have considered these proposals as a package because we believe there are genuine benefits to be gained by testing how different alternation and night flight options might combine to create the best outcomes for our communities. We must also ensure that our proposals allow us to deliver the number of additional flights that Government policy requires.

Feedback from previous consultations



In our Airspace and Future Operations Consultation, in January 2019 we consulted on runway alternation, as a way of providing respite to areas further away from the airport that do not receive respite from runway alternation today.

There was a wide range of opinions on the best solution for respite, but the most consistent preference was for respite during the evenings, night-time and early mornings. We have used this feedback to help evaluate how we can provide respite across these periods.

By respite, we mean predictable relief from aircraft noise for a period of time, for local communities. 'Relief' can be defined as a break from, or a reduction in, aircraft noise.



For more information on the effects on local communities please see the **Heathrow Expansion and Your Area** documents. **Appendix D** of the **Future Runway Operations** document also contains a graphical summary of what our preferred proposals would mean for the communities close to the airport.

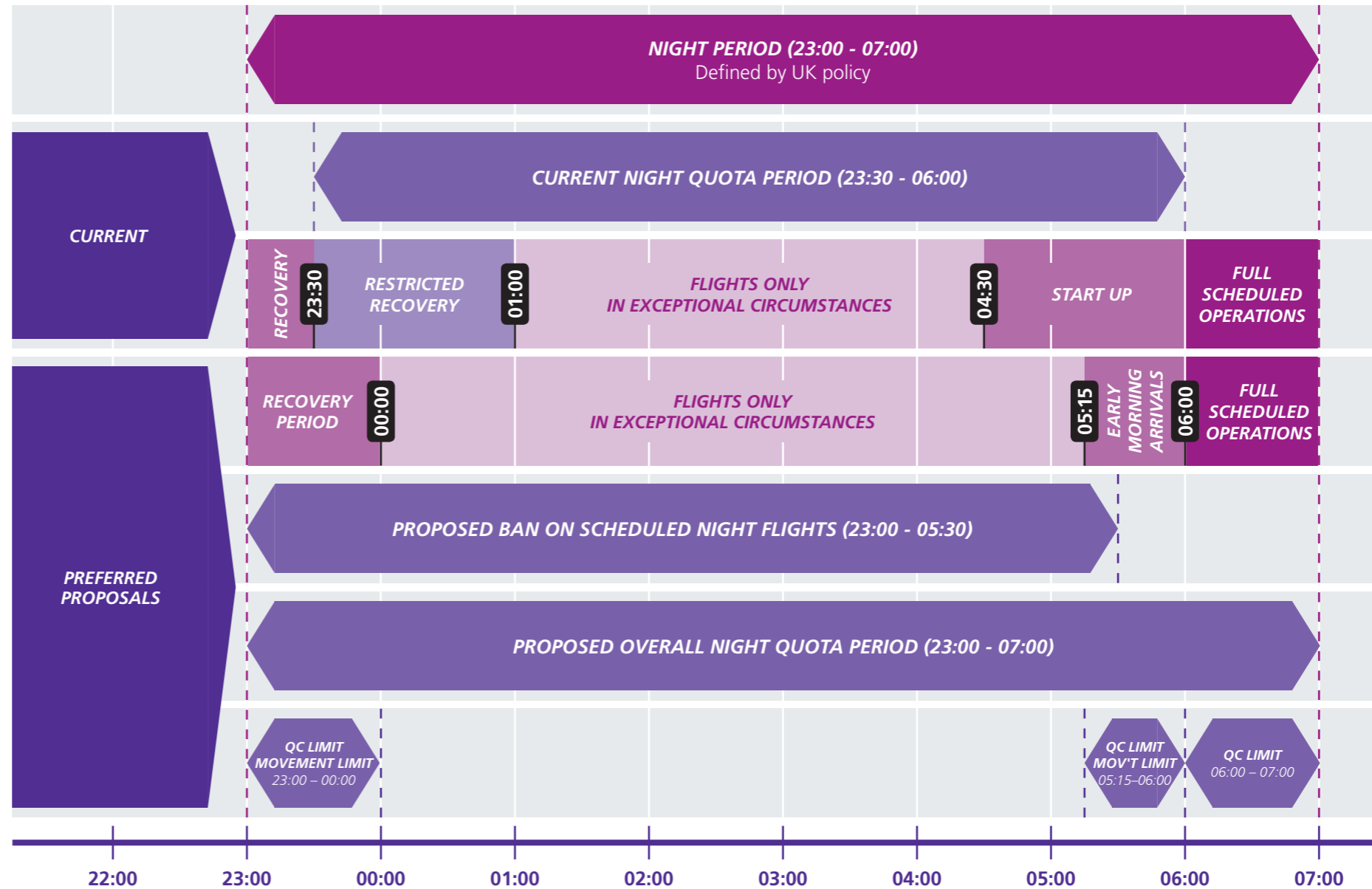
Benefits of our proposal

We believe that our proposals give the right overall package of measures because when combined, they provide every community at least 7 hours' respite between 22:00 and 07:00.

In addition, this will:

- share early morning, evening and night respite between communities;
- ensure that a community which experiences early morning arrivals before 06:00 is not subject to any operations after 14:00 / 15:00 the previous day;
- ensure that where any community experiences night operations (in the 'recovery period' described further in **section 5.2** of this document) it will not experience any operations the following day before 14:00 / 15:00.
- ensure that the number of communities experiencing early morning operations (pre 06:00) on any particular day is minimised by using just one runway;
- allow us to deliver the required numbers of additional flights under Government policy, stated in the Airports NPS as 'at least 740,000 ATMs per year';
- continue to allow onward connections to and from long-haul flights; and
- avoid a sudden surge of activity when operations start in the morning.

Current and proposed night flight timings



The diagram above summarises our proposals for the night time regime that allow us to deliver the benefits set out above. We set them out alongside the current night time regime for comparison. It should be noted that a diagram of this type cannot convey the benefits to each community of runway alternation which is described in **section 5.1** of this document, however it provides a broad overview of the night time regime. The night quota period, QC limit and recovery period referred to in the diagram are described further in **section 5.2** of this document and full details on these terms can be found in **Section 4.10** of the **Future Runway Operations** document.

Our proposals therefore improve the current night time regime in the following way:

- whilst we currently operate a voluntary commitment not to schedule flights between 23:05 and 04:45, we propose to put in place a formal ban on scheduled flights between 23:00 and 05:30;
- we currently operate "recovery periods" where late running planes are allowed to use the runways up to 01:00 and sometimes later. With expansion, we propose to limit the recovery period so that it stops at 00:00.

5.1. Runway alternation

We know that communities around Heathrow value relief from aircraft that can be provided by runway alternation. During the day, when planes are landing and taking off to the west (westerly operations), we alternate the use of our two runways to provide local communities with respite.

The current alternation pattern means that for part of the day we use one runway for landings and the other for take-offs then, halfway through our day at 3pm, we switch over.

At the end of each week we switch completely. What we did in the evening during the previous week, we now do in the morning and vice versa.

This is so that communities get respite from planes in the morning one week and in the evening the next.

When planes take off and land towards the east (easterly operations) we do not alternate the runways because the taxiways are not currently in place for us to do so during daytime operations because of the legacy of the Cranford Agreement.

At the Airspace and Future Operations Consultation in January 2019 we presented a potential runway alternation pattern to be used for a three runway Heathrow and asked whether people would prefer to have longer periods of respite less frequently (all day on some days but no relief on other days) or a shorter period of respite (e.g. for 4-5 hours) every day?

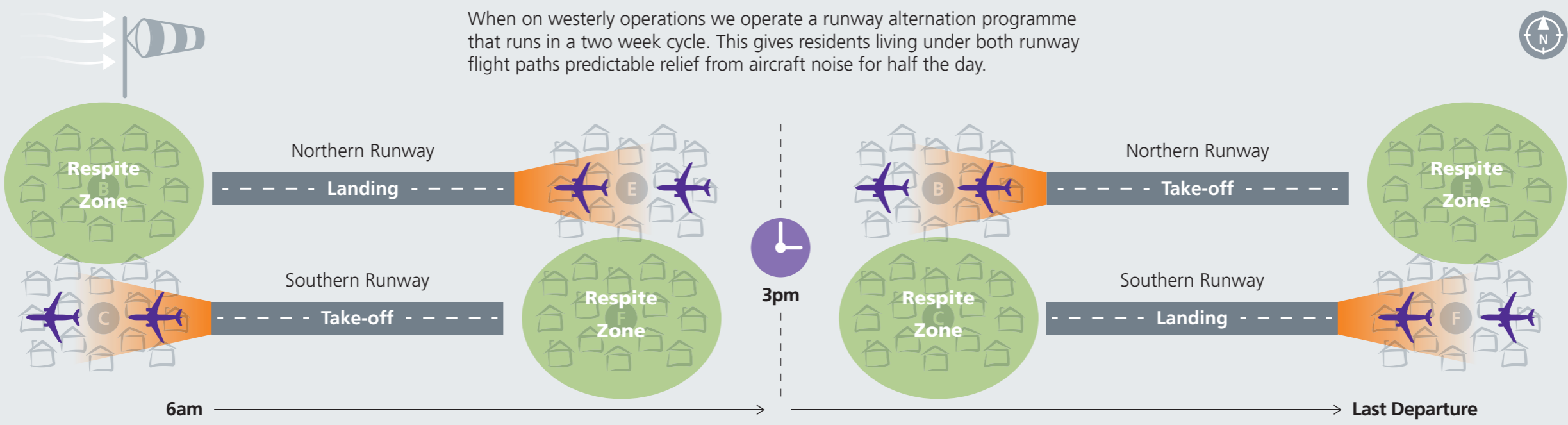
Feedback from the consultation told us that people value respite early in the morning, later in the evening and in the night time. We have taken this feedback on board and are proposing a runway alternation pattern that maximises respite at these times and provides for runway alternation every day during the day.

What is the Cranford Agreement?

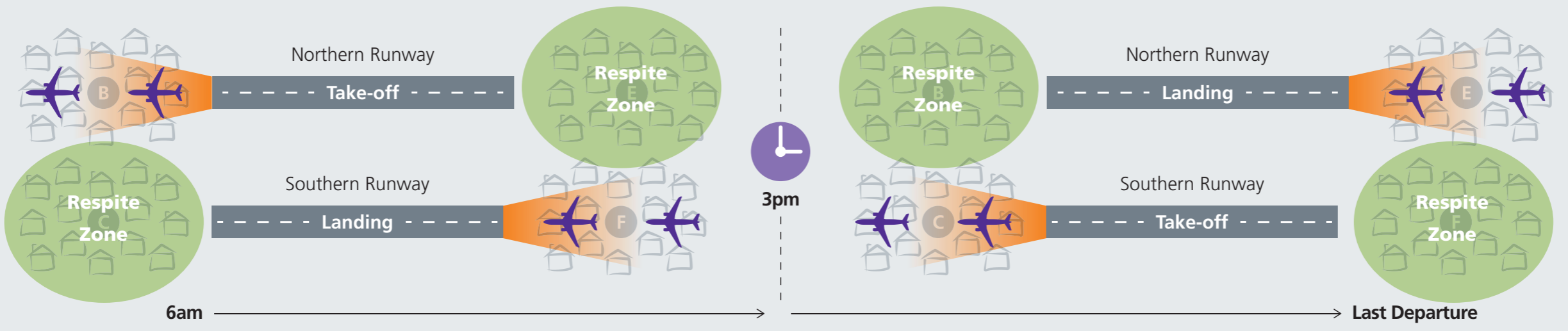
The Cranford Agreement was an agreement between the Government and the residents of Cranford which restricted the number of take offs from our northern runway in an easterly direction over the village. The agreement is no longer in place. Further details can be found at: www.heathrow.com/noise/heathrow-operations/cranford-agreement



Runway alternation – Westerly operations – Week 1



Runway alternation – Westerly operations – Week 2



Proposed runway alternation pattern for an expanded Heathrow

Currently, we mainly use one runway for departures and one runway for arrivals. With three runways we will be changing this so that one runway is used for arrivals, one runway is used for departures and the remaining runway is 'mixed mode' which means it will be used for both departures and arrivals.

What is runway mode?

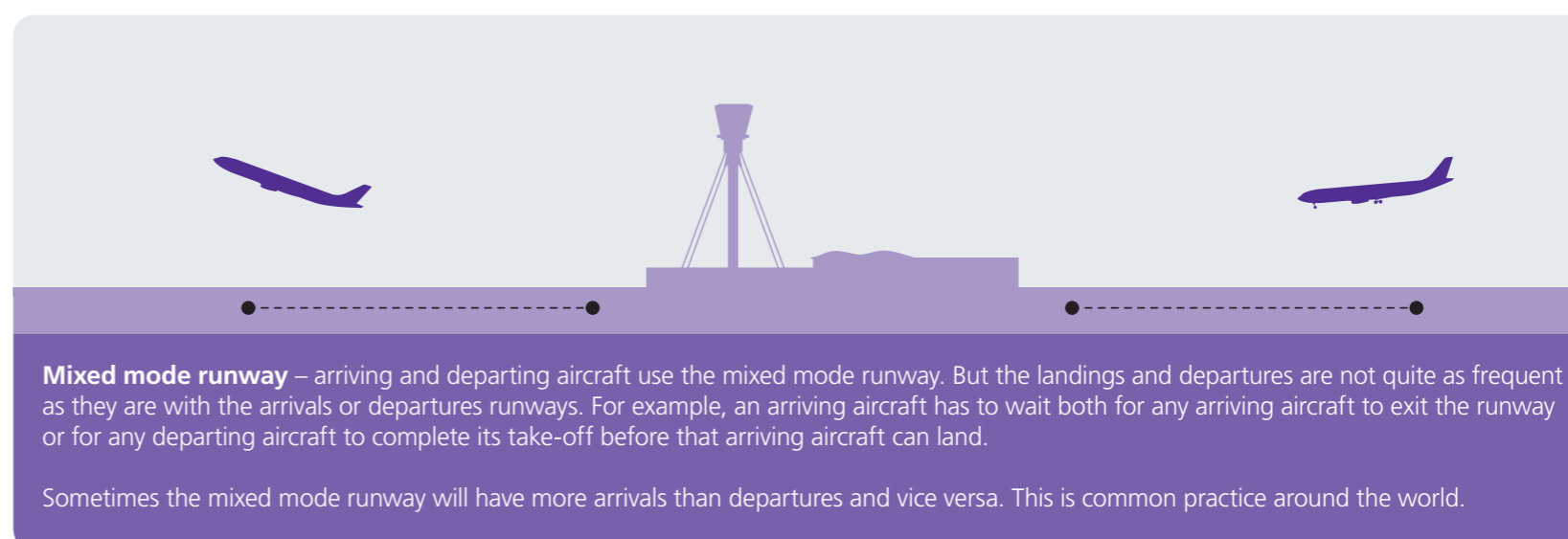
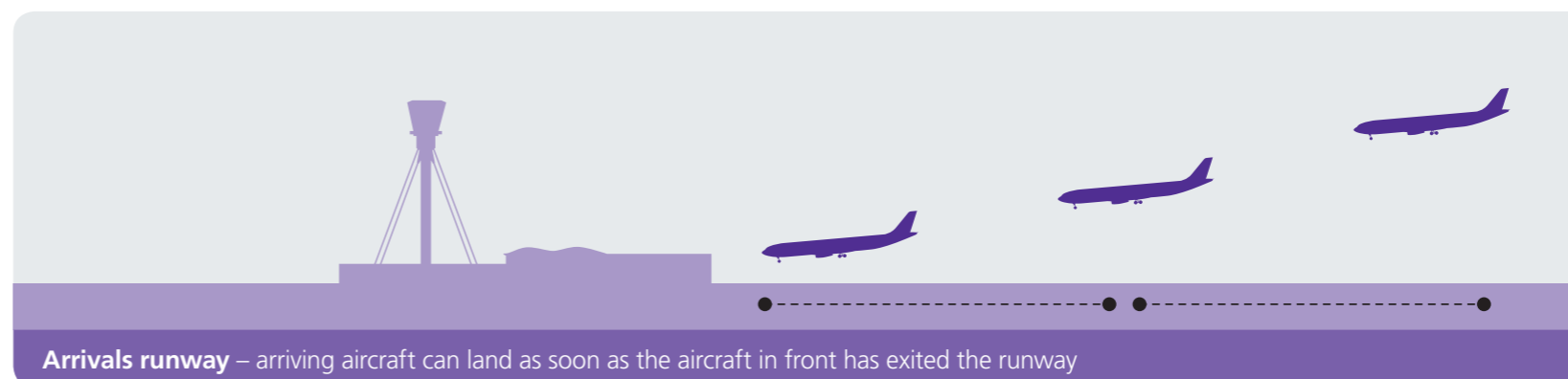
A runway mode means whether a runway is used for landings or departures, or both. If a runway is used for either landings or departures, we call this "segregated mode". If it is used for both landings and departures at the same time but usually less intensively – we call this "mixed mode".

Having three runways allows us to rotate their use so that they may be used in turn for landings, departures or in "mixed mode".

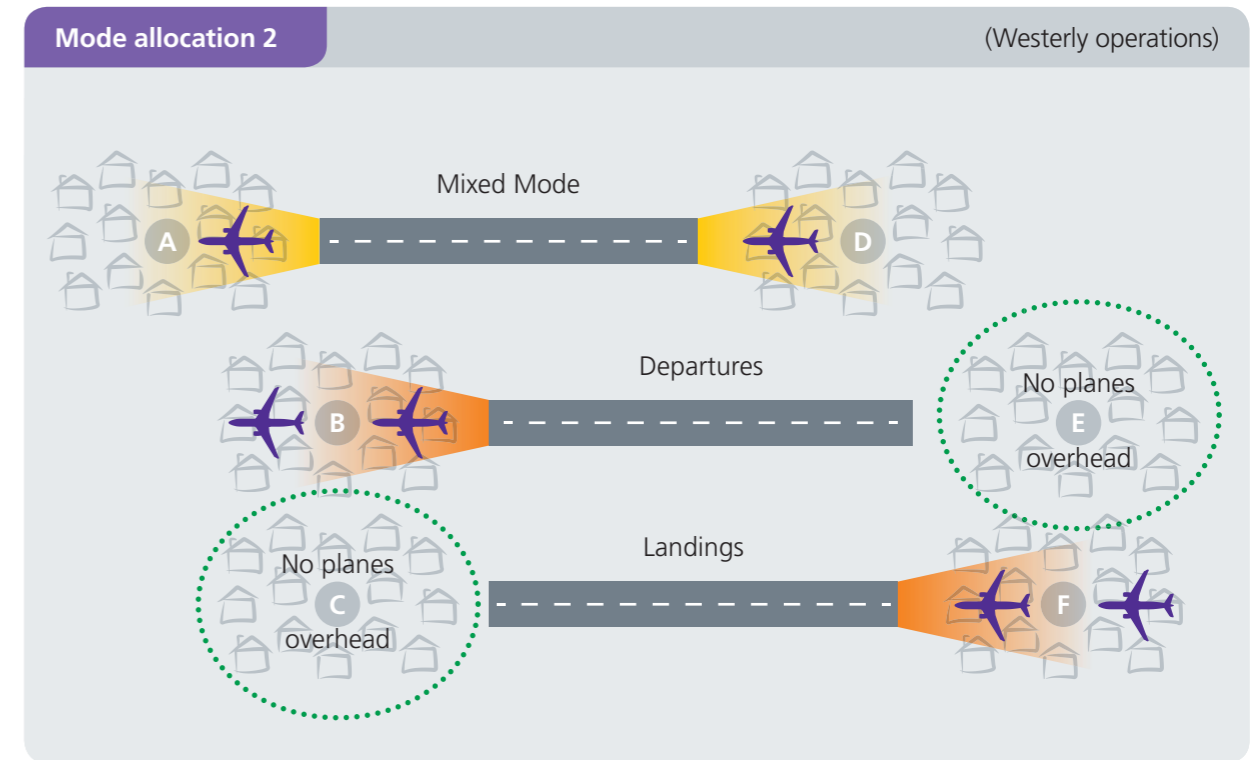
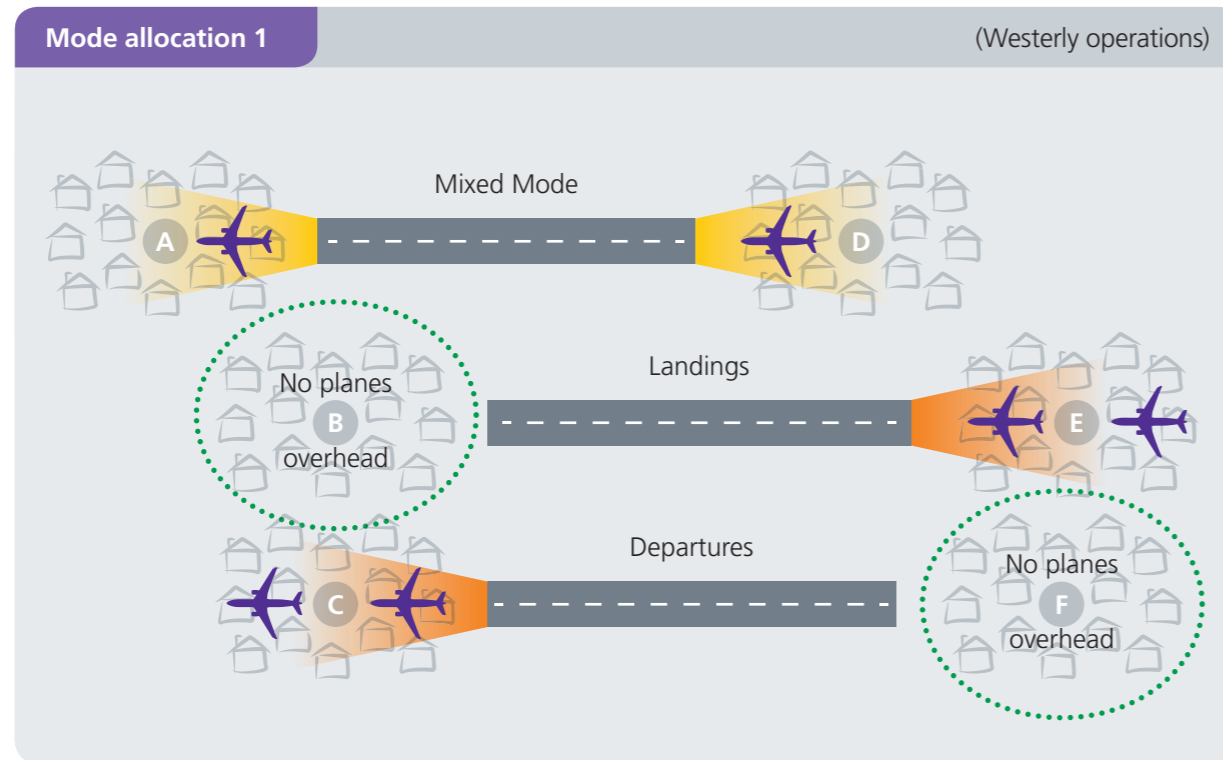
The diagram below illustrates the idea and shows that alternating the use of the runways allows communities at the end of the runways to have a break from overflying, whether aircraft are landing from the east or from the west.

What is mode allocation?

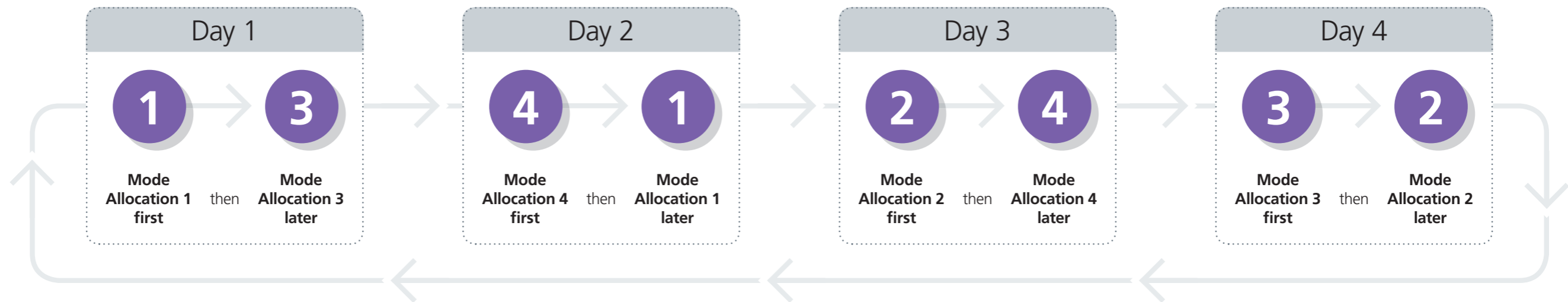
Mode allocation is how we describe how runway modes are used together across all the runways at one time. For example, the new third runway might be allocated to a "mixed mode", the centre runway on a "segregated arrivals mode" and the southern runway on a "segregated departures mode". We have developed four different arrangements for mode allocation between the three runways.

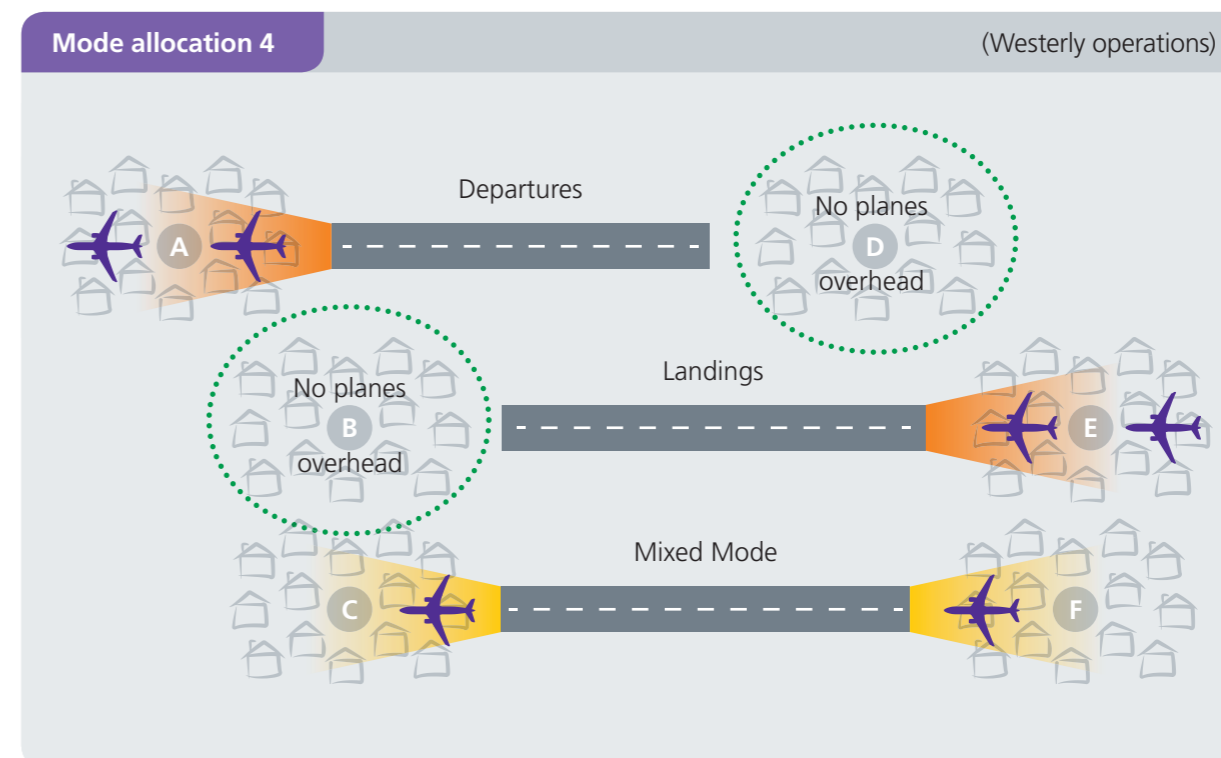
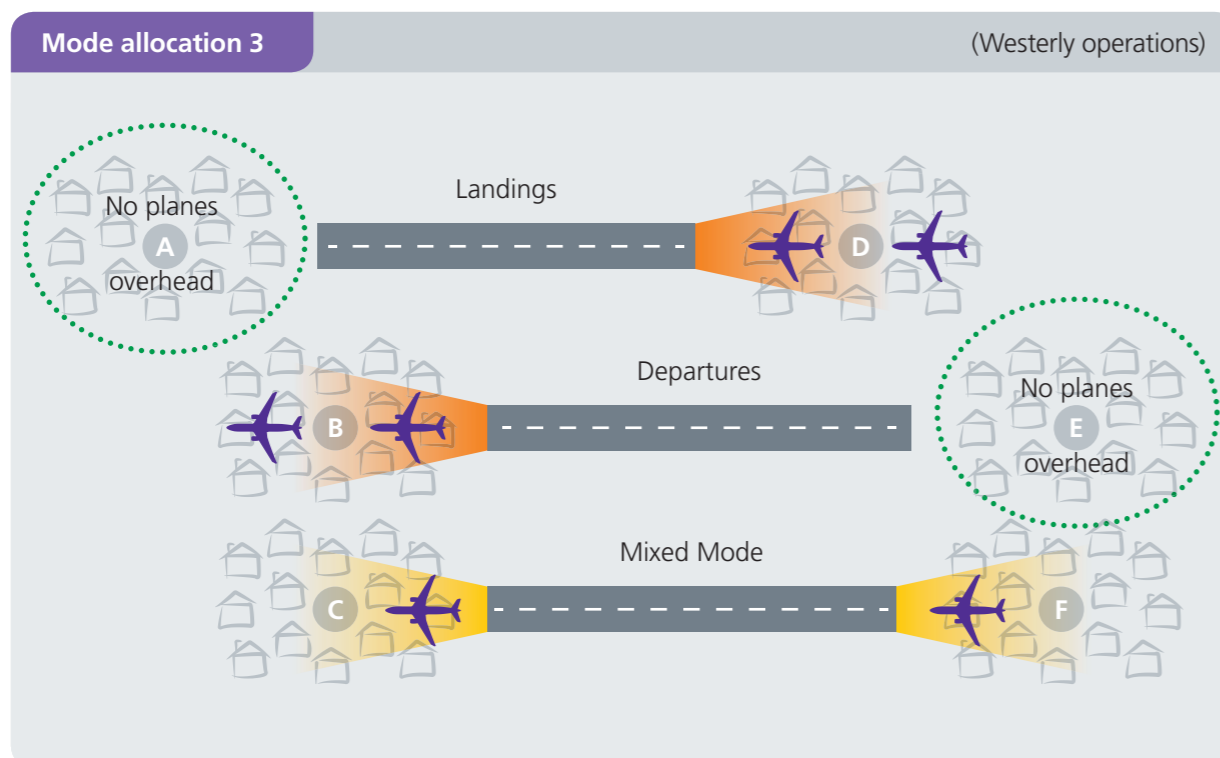


The four different mode allocations are:



There are technical restraints which determine the order we can move around the mode allocations. We are proposing that we will move through them in the following order:





Our proposed daily runway alternation pattern will repeat this sequence every four days. So, on Day 5 we would start again as Day 1.

Within each day, the change from the first mode allocation to the second mode allocation can happen either at 14:00 or 15:00 (we are seeking your views as to when exactly it should change) and again at midnight. This change at midnight is in preparation for the following operational day and occurs when there are no scheduled movements taking place.

We also have the opportunity to ensure that when the wind changes direction and we have to change the direction in which we operate the runways (so from westerly to easterly and vice versa), that communities continue to receive the respite that they were expecting, something that is not possible today due to the Cranford Agreement. We are calling this Reflective Alternation.



For more information on our runway alternation pattern and reflective alternation, please read the **Future Runway Operations** document.

5.2. Ban on scheduled night flights

Night flights are an important part of operations at airports around the world. The differences in time zones at the origin and destinations of flights mean that it is difficult to avoid flights at night and early in the morning.

A high proportion of long haul flights arrive in the early morning and allow onward connecting flights both to key domestic routes and strategically important global routes. Early morning flights have important economic benefits for the UK. Late evening flights are also important to freight operators, airlines and businesses across the UK due to the nature of their 'just in time' overnight operations.

Currently there is no ban on night flights at Heathrow, but there are restrictions on the type of aircraft that can be scheduled and operated from 23:00 to 07:00 (the 'Night Period') and there is then a more restrictive period from 23:30 to 06:00 (the 'Night Quota Period') which has no scheduled ban but has limits on the total number of movements and quota count points which are set by the Department for Transport – effectively we can operate more aircraft if they are quieter, fewer if they are noisier. These are some of the strongest restrictions on night flights of any hub airport in Europe.

What is the quota count?



The quota count system, set by Government, has been in place at Heathrow since 1993 and applies to all the major London airports. Each plane has a number of points based on how noisy it is – the noisier the plane the higher the number of points. If a plane lands or takes off during the Night Quota Period (23:30 to 06:00), its points count towards a limit based on whether it's operating during the summer or winter period.

The night quota count system is designed to discourage the use of noisier older planes and encourage the use of quieter newer planes. No plane with a very high score (the oldest and noisiest) is allowed to take-off or land during the night quota period.

What is the movement limit?



The movement limit restricts the total number of flights that can take place in the Night Quota Period over each summer and winter period.

We also operate a voluntary commitment of no scheduled departures between 22:50 and 06:00 or scheduled arrivals between 23:05 and 04:45. This means that there are no scheduled flights after 23:05 and before 04:45.



Further details of the current night time regime at Heathrow can be found in the **Future Runway Operations** document.

We are proposing a scheduled night flight ban from 23:00 to 05:30.

The Airports NPS sets out the Government's expectation that with expansion we should have a 6.5 hour ban on scheduled night flights between the hours of 23:00 and 07:00.

We have always agreed that a ban on scheduled night flights is necessary to control the possible noise and other effects of expansion. We have carried out an assessment of different options for the proposed night flight ban to determine the right length and the right start and finish times.

You can see this assessment and a description of the process we have followed in the **Updated Scheme Development Report**.

The Airports NPS sets out the need for a ban on scheduled night flights. Scheduled flight times are the time you see on your ticket. Sometimes flights have to depart or arrive outside their scheduled times due to special circumstances – we explain this in the 'Recovery Period' section.

'Scheduled' flights

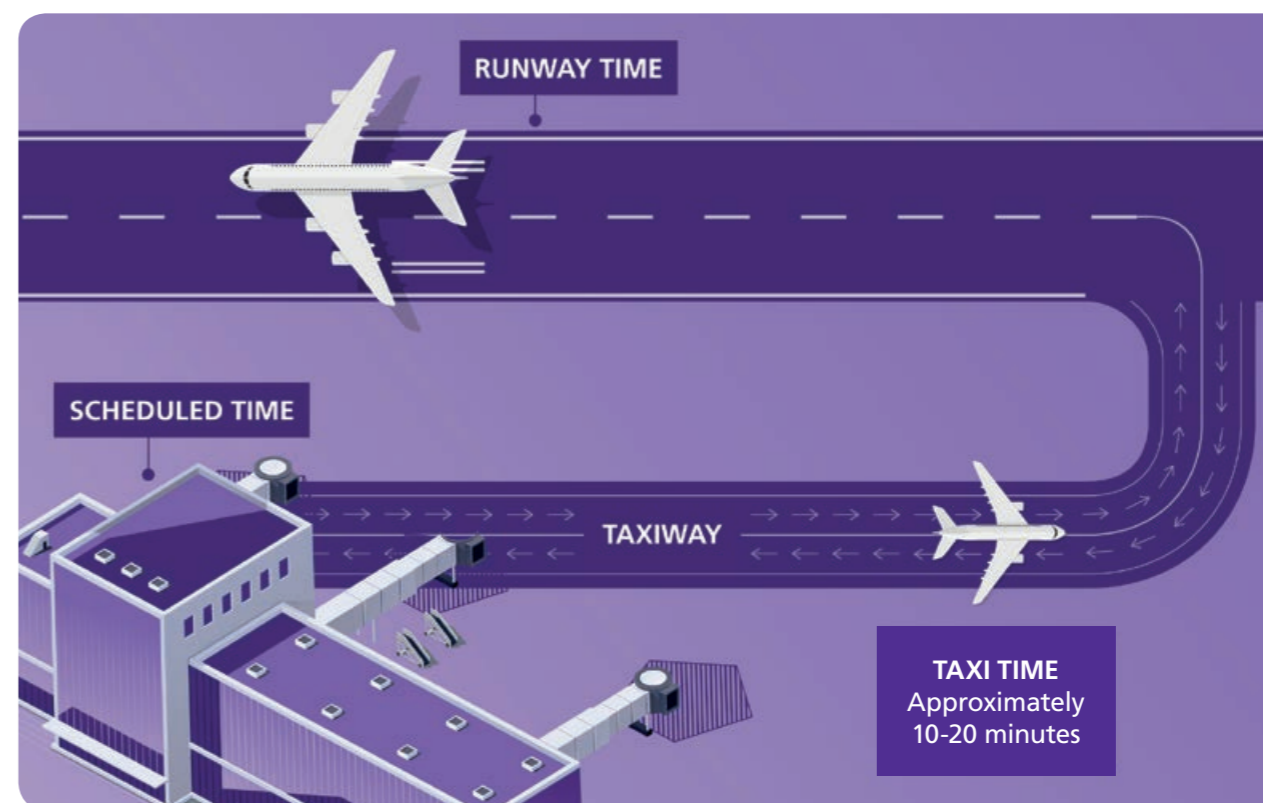
It is important to understand the difference between the scheduled time (the times shown on arrival and departure boards) and the time planes arrive or depart from the runway.

Using arrivals as an example:

- The **scheduled time** of an arrival is the time that the plane reaches the airport stand (when the plane stops at the terminal gate and you get off).
- The **runway time** is the time the plane touches down on the runway.

Today, there is approximately 15 minutes between the plane touching down on the runway and it taxiing to the airport stand (although this will vary between flights and times of the day).

It is the same for departures, the scheduled time is the time the plane will push back from the gate and the runway time will be approximately 15 minutes later when it takes off.



Early morning arrivals

We are proposing that we will only use one runway for the early morning arrivals scheduled from 05:30 when the scheduled night flight ban ends. The runway used will change each morning in line with our alternation proposals.

The other two runways will not become operational until 06:00.

We consulted on the question of the early morning arrivals in our Airspace and Future Operations Consultation in January 2019. We asked whether we should:

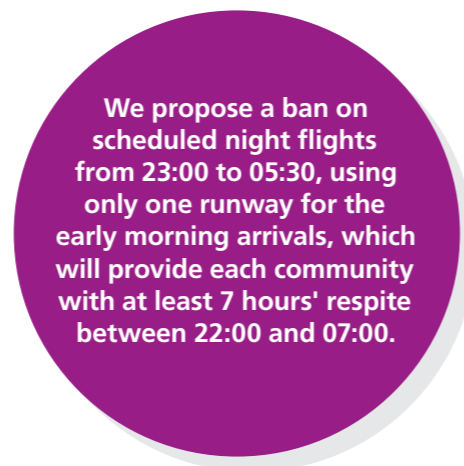
- schedule flights from 05.30 using one runway, which is an earlier start but by only using one runway, fewer people would be overflowed, or
- schedule flights from 05.45 using two runways, which is a slightly later start but means more people would be overflowed.



Further details on this feedback can be found in the **Future Operations Consultation Feedback Report** document.

Feedback from previous consultations

A majority of those who expressed their view preferred the earlier 05:30 start using one runway. We agree that this produces a better result and have taken this forward in the timings of our proposed ban on scheduled night flights and our proposals for runway alternation.



We also propose that the current 'Quota Count' system for aircraft operating before 06:00 will remain in place. This will mean that there will be a movement limit on the total number of aircraft that can operate before 06:00 and a total quota count limit to encourage the use of quieter aircraft across the whole period from 23:00. We also propose to set out specific limits applicable to just the 05:30 to 06:00 period as part of our proposals for a 'noise envelope'.

As a further restriction we will also propose a quota count limit for the 06:00 to 07:00 period (but not a movement limit) as part of our proposals for a noise envelope.



Further details on the noise envelope can be found in **Section 7.4** of this document.

Recovery periods

Sometimes flights need to operate in the night period when they have not been scheduled to do so. This could be for a number of reasons such as delays that have built up during the day, perhaps due to bad weather or due to a technical fault with an aircraft that needs to be repaired.

There is always a balance to be struck as to whether a flight should be allowed at night, considering the effects on local communities, passengers and the airline network. Having a recovery period allows Heathrow to reduce the potential for aircraft to be diverted to other airports as well as the knock-on effects to our passengers, who may be required to stay overnight until the next available flight, and the airline network.

We are proposing to change the way we manage aircraft if they are delayed into the night period to impose stricter rules than we have today for what we refer to as the 'recovery period'.

We are proposing to have the following recovery periods at Heathrow during the night period using one runway each for:

- **Departures from 23:00 until midnight** (1 hour of recovery time beyond the last possible scheduled departure time); and
- **Arrivals from 23:00 until 23:30** (30 minutes of recovery time beyond the last possible scheduled arrival time)

Late-running aircraft would not be permitted to arrive after 23:30 or depart after 00:00 (midnight) other than in exceptional circumstances.

As set out in relation to early morning arrivals, our proposal contains beneficial changes to the Quota Count system. Currently, between 23:30 and 06:00 there are limits not only on the type of aircraft that can operate or be scheduled to operate, but also the total number of movements permitted and sum of all the Quota Count (QC) points available.

We are proposing that the current quota count system for aircraft that operate after 23:30 remains in place but for it to start earlier from 23:00. This means that noisier aircraft would not be allowed to operate at all and that there would be an overall limit to the numbers of aircraft that can make use of the recovery period. We will work with Government to propose new lower limits that are more applicable to the period from 23:00 to midnight. We also propose that there should be overall quota count limits for the whole period of 23:00 to 07:00 which both our operations in the early morning and in the recovery period will have to observe.



Details of how the night quota regime operates today and our future proposals are set out in the **Future Runway Operations** document.

5.3. Directional preference

The direction planes arrive and depart from Heathrow depends on the direction of the wind. For safety and performance reasons aircraft typically take off and land into the wind.

When winds are light (below 5 knots – about 6 miles per hour) aircraft can potentially take off or land in either direction. Rules are set by Government to determine what to do in these circumstances. These are called a "directional preference" and they say in which direction operations should be when the winds are light enough for there to be a choice.

Currently during the day, a 'westerly preference' is operated at Heathrow. This means that even during periods of light easterly winds aircraft will continue to land in a westerly direction, making their final approach to land over London. With this westerly preference in place the result is as **shown** in the diagram below

As a long term average, the wind direction means that we have to have westerly operations for approximately 50% of the time, and easterly operations for approximately 30% of the time. The current westerly preference means that the remaining 20% of the time, where wind speeds are low enough to operate in either direction, we choose to operate in a westerly direction. Therefore, applying a "directional preference" in the future will only apply to this 20%.

At the Airspace and Future Operations Consultation in January 2019, we asked for feedback on how we manage the direction of arriving and departing planes at Heathrow.

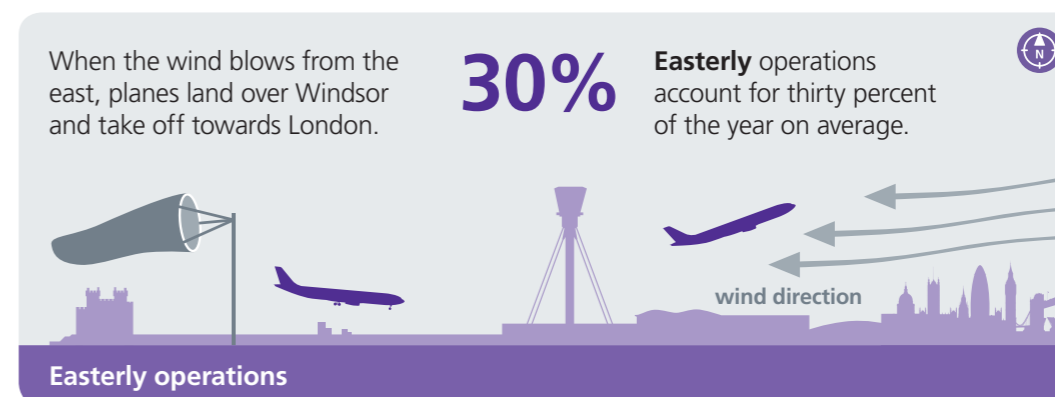
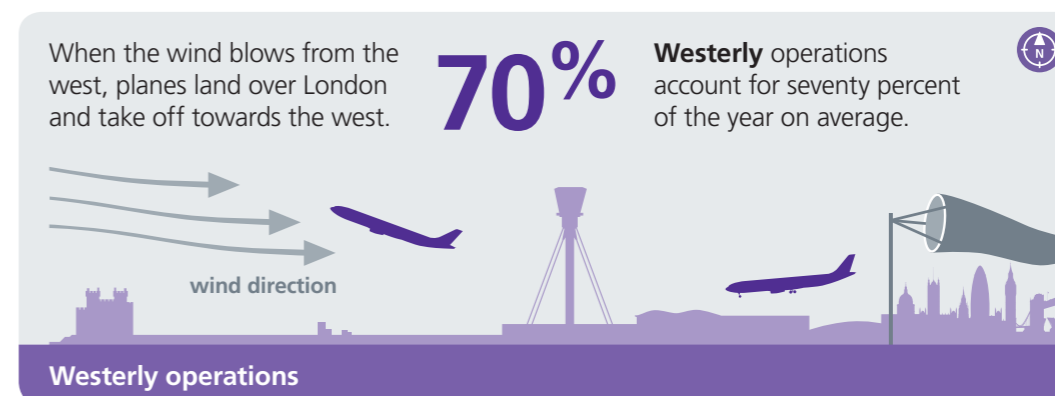
Feedback from the consultation showed support for measures which help to deliver respite from aircraft noise. Responses also showed a preference for Heathrow to intervene if planes have been operating in the same direction for a long time.

Accordingly, we are proposing to operate an expanded Heathrow using a 'managed preference' not the 'westerly preference' we use today.

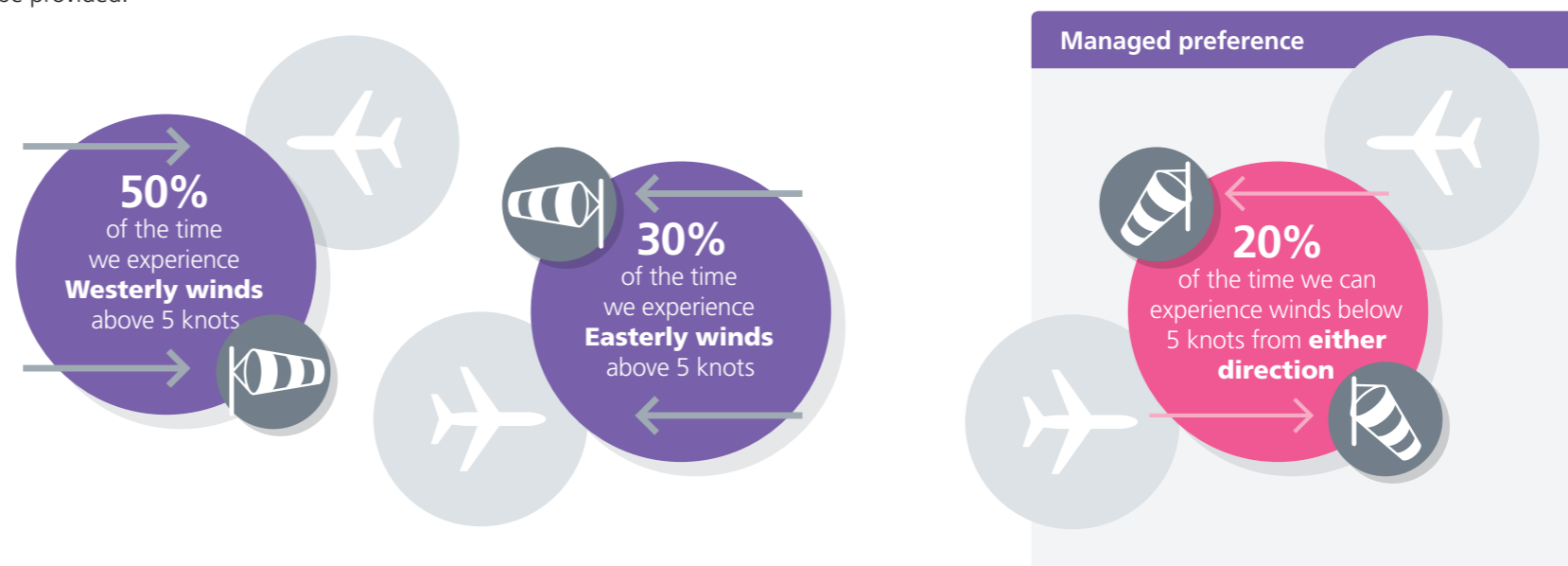
This would involve changing the direction of arriving and departing aircraft based on a set of criteria or rules (which are to be determined), designed to limit overall noise effects on communities and to help deliver periods of relief for them, when considered with our proposals for runway alternation. Between now and DCO application submission we will explore the use of managed preference to reduce the effects of aircraft noise for our communities through engagement with our key stakeholders and communities. Our proposals will be presented in our DCO application.

A managed preference could be used to break up long periods of operating in one direction, if the wind is low enough to allow a change.

A managed preference would achieve a balance between minimising the total number of people adversely affected by aircraft noise, a fairer sharing of arriving and departing aircraft and the most efficient operation for the airport, due to reducing the need to switch operating direction multiple times during the day. When put together with our proposals for a reflective runway alternation scheme, communities at the ends of the runways will receive much greater predictability over the amount of respite that will be provided.



i For more information on our proposals for directional preference, and what effect these may have on communities, please read the **Future Runway Operations** document.



5.4. Early growth

The Airports NPS identifies the need for increased airport capacity at Heathrow and the important role that aviation has to play in the UK economy.

It explains that current constraints on capacity restrict the ability to travel conveniently, prevent competition between airlines and lead to increased fares. Heathrow's operations are currently capped at 480,000 Air Transport Movements (ATMs) per year by a condition on the grant of planning permission for Terminal 5 in 2001. We have been operating at around 98% of that approved capacity since 2005 to the detriment of consumer and economic interests.

The Airports NPS makes clear that not increasing airport capacity in the south-east would be damaging to the UK economy and to the UK's hub status. It highlights that the needs case has shown the importance of developing more capacity more quickly.

The main part of the expansion of Heathrow is the construction of the new runway. However, the new runway will not be open before 2026, which is 11 years after the Airports Commission released its final report, endorsing capacity growth at Heathrow.

Our application for development consent will seek to lift the restriction of 480,000 ATMs per year and grow the airport by at least another 260,000 ATMs as required by the Airports NPS. If our application is granted, we want to bring forward some of the benefits of expansion as soon as practical by making increased use of our existing runways before the new runway is completed. We call this 'early growth'.

We have been operating just within our capped capacity for many years and there is substantial built up demand from airlines to open new routes or to reinforce services to existing domestic and international destinations. We want to deliver the benefits of these new connections as soon as practicable.

In September 2016 we published proposals explaining that we believed we could provide up to an additional 25,000 ATMs a year on our two existing runways. It is important, however, that any early growth in use is consistent with the environmental policies of the Airports NPS and does not undermine the efficient operation of the airport.

The expansion of Heathrow will grow the airport by at least 260,000 additional ATMs per year as required by the Airports NPS. We propose to bring some of that growth forward early on our existing two runways before the third runway opens. This is what we call 'early growth'



How much early growth can we provide?

We explain in our **Early Growth** document the testing we have done to consider how many additional ATMs we could deliver without affecting the airport's efficient operation, and without unacceptable environmental and community effects. That work has confirmed that we expect to be able to introduce up to 25,000 additional ATMs before the opening of the new runway.

New navigation technology allows us to make more efficient use of our runways safely, whilst further investment in on-airport facilities can increase our capacity to deal effectively with more passengers and planes. The initiatives both improve the efficiency of the airport and enhance the connecting journey for transferring passengers. They include measures for enhancing arrival capacity and resilience such as Independent Parallel Approaches (IPA) and enhanced Time Based Separation for arriving and departing aircraft.

Maintaining airport efficiency

We will always safeguard the efficient operation of Heathrow and, to ensure that early growth does not lead to increased delays or disruption, we propose that:

- we will continue to invest in development of infrastructure, technology and people at the airport, to enable growth above our existing ATM cap ahead of a third runway
- in creating additional runway capacity (adding slots for airlines to fly) we will retain our current scheduling processes, which are proven to mitigate delays, protecting service for passengers and airlines
- as we grow, we will balance the benefits of additional flights in peak and off peak periods with our operational performance and resilience (keeping to schedule and delivering punctuality)
- we will re-confirm our commitment to our licensed Service Quality Regime and service standards for passengers and airlines (Service Quality Regime enforced by our regulator, the CAA).

These commitments will act as a framework to ensure that early growth can only come forward where that does not adversely affect the operation of the airport.



For further information on these measures please see the **Early Growth** document.

How we will ensure that effects are acceptable

We have tested the potential environmental effects of early growth and found that they are relatively limited. To ensure that any effects stay within acceptable limits, we propose the following commitments:

- Our strategy for Environmentally Managed Growth of the airport (see **section 8** of this document) will commence from the onset of early growth. That strategy is further explained in our separate documents **Future Runway Operations** and **Environmentally Managed Growth**, but in brief it sets out a comprehensive basis for managing the growth of the airport to ensure that its effects always remain within the boundaries of those considered acceptable by the Airports NPS.
- Our Noise Insulation Scheme (see **section 7.4** of this document) will be introduced from the beginning of early growth.
- We are developing Surface Access Proposals (see **section 6** of this document) to ensure that a three runway Heathrow meets the transport requirements of the Airports NPS; this includes preparation of a Surface Access Strategy which we will be legally obliged to comply with. The Surface Access Strategy will apply once expansion is consented and will therefore also include the early growth phase. The elements of the Surface Access Strategy will be implemented proportionately to mitigate effects as they arise. For example, our proposals for emissions charging for vehicles to access the airport may be implemented before the first date of operation of early growth if necessary.

We are still developing and assessing how we move from the current arrangements that we have with two runways to the package of measures that we are proposing to be in place from the opening of the third runway, particularly how we implement the beginning of the proposed ban in the evening and the proposed changes to the quota system / recovery period.

As early growth may lead to additional flights in the 06:00 to 07:00 period (classified as within the night period), we confirm that our preferred proposal is that the early morning start of the proposed ban on scheduled night flights for three runways (05:30 scheduled time) should also apply from the outset of early growth. This approach is supported by our community and environmental assessments.

All of these matters will be worked up through engagement with stakeholders, but we would also like to receive your views on our emerging proposals for early growth.



For more information about how we propose to implement early growth, please refer to the **Early Growth** document

Your views



We want to know what you think about:

- our runway alternation proposals, in particular whether you think we should alternate the runways at 2pm or 3pm
- our preferred proposal for a ban on scheduled night flights, and/or whether you would prefer an alternative proposal
- our proposals for managing early growth

Please see **section 14** of this document for specific questions



Central Bus Station
Chapel



6. Travelling to and from Heathrow – surface access proposals

The expansion of Heathrow is a unique opportunity to change the way that people and goods travel to, from and around the airport. Expansion is an opportunity to strengthen transport connections and provide a range of options so that passengers and colleagues can travel to the airport efficiently and sustainably.

Improving surface access brings a range of benefits to passengers and colleagues, but also to local communities around the airport. We want Heathrow to be a great place to live, work and visit and we know from our engagement that good transport links to the airport are important for local people and local businesses.

This section describes how we propose to improve and develop transport and travel for an expanded Heathrow to help us achieve our pledge to deliver expansion with no more airport-related traffic on the roads than there is today. The physical changes we are proposing to make to surface access are described earlier in **section 3** of this document.

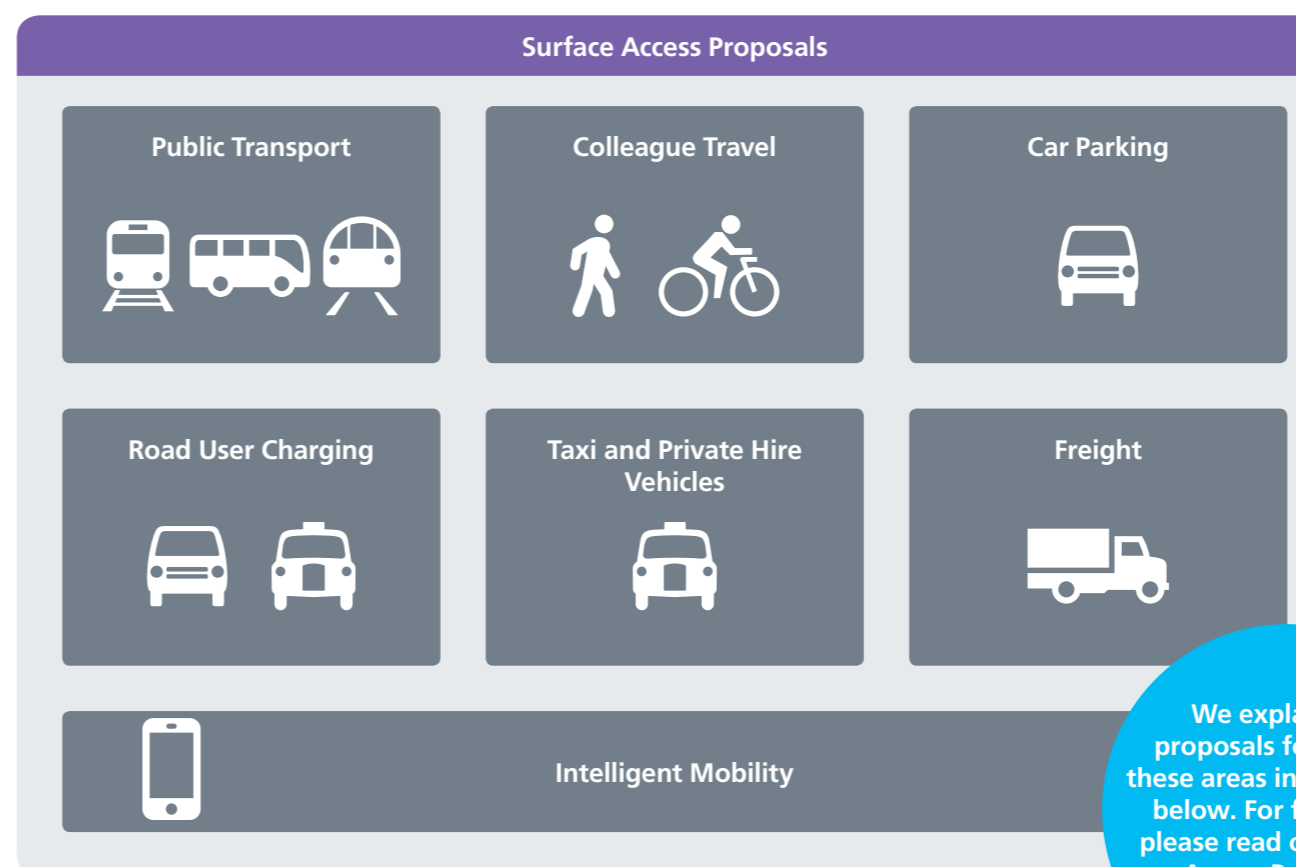
As the airport grows, the number of passengers, colleagues and goods vehicles needing to travel to and from Heathrow will increase.

We want to accommodate this increase in demand in a way that reduces effects on local communities and on the wider UK transport network. To do this, we need to manage surface access to control both emissions and congestion.

The Airports NPS sets out targets for us to increase the proportion of trips made to the airport by passengers by public transport to at least 50% by 2030 and 55% by 2040.

The Airports NPS also requires us to reduce the number of car trips made by colleagues by at least 25% by 2030 and 50% by 2040 compared to 2013 levels.

Our Surface Access Proposals document covers seven key areas, as outlined in the diagram below. These deliver on our sustainability agenda and comply with the Airports NPS targets.



We explain our proposals for each of these areas in more detail below. For full details please read our Surface Access Proposals document.

6.1. Public transport

We are committed to improving both the choice and range of options for people travelling to and from Heathrow and improving the quality of their experience.

Our plans for expansion address this through encouraging greater use of public transport to minimise airport related traffic and the associated emissions.

We know from that for people to choose public transport, it needs to be high quality, frequent, reliable, affordable and meet passenger requirements. Our proposals for public transport at the expanded airport are based on three key principles. These are:

1. Making best use of existing public transport

Our aim is to make existing public transport options more attractive to current and potential passengers by making them more affordable, quicker and easier to use and buy tickets for. We will also invest in enhancing the user experience of existing local transport modes that support Heathrow colleagues on their journey to work.

2. Supporting committed improvements

There are several committed improvements which will increase rail frequency and improve the public transport catchment of the airport. These will help attract passengers from cars and taxis to public transport.

The Elizabeth Line (Crossrail) will provide a direct rail connection from Heathrow to the West End, the City of London and Canary Wharf for the first time. At Old Oak Common, an interchange to HS2 will transform journey times to the Midlands and the North.

There are also the proposed Government schemes for a Western Rail Link and Southern Rail Access to Heathrow, which would further enhance the rail network to the airport and serve the areas to the West and South of the airport.

These improvements are not part of our expansion proposals; however, we will work with promoters to ensure these schemes meet the needs of airport passengers and colleagues.

3. Developing new public transport routes

We will deliver new public transport links to create a world leading public transport focussed airport.

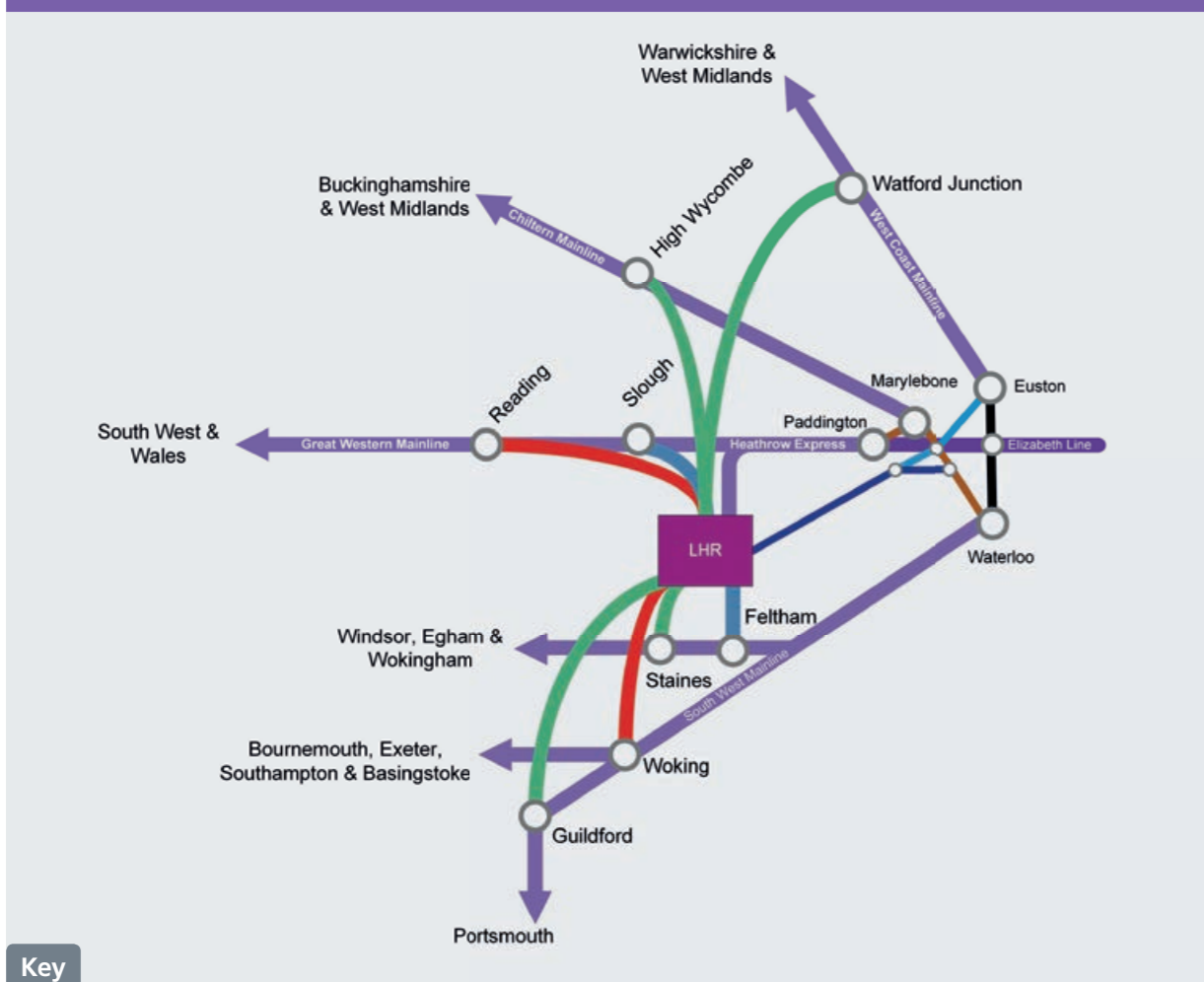
Our vision is to put Heathrow at the heart of the rail network, with direct links to the west and south. This will increase the number of people who can choose rail when accessing Heathrow.

We also plan to improve coach services through strategic partnerships with coach operators and improvements to the airport bus station in both capacity and passenger experience.

Figure showing indicative future coach corridors



Figure showing indicative RailAir coach links – coaches and buses that connect Heathrow with the national rail network



- Key**
- Improved Existing RailAir
 - Proposed RailAir
 - Improved Conventional Bus Service

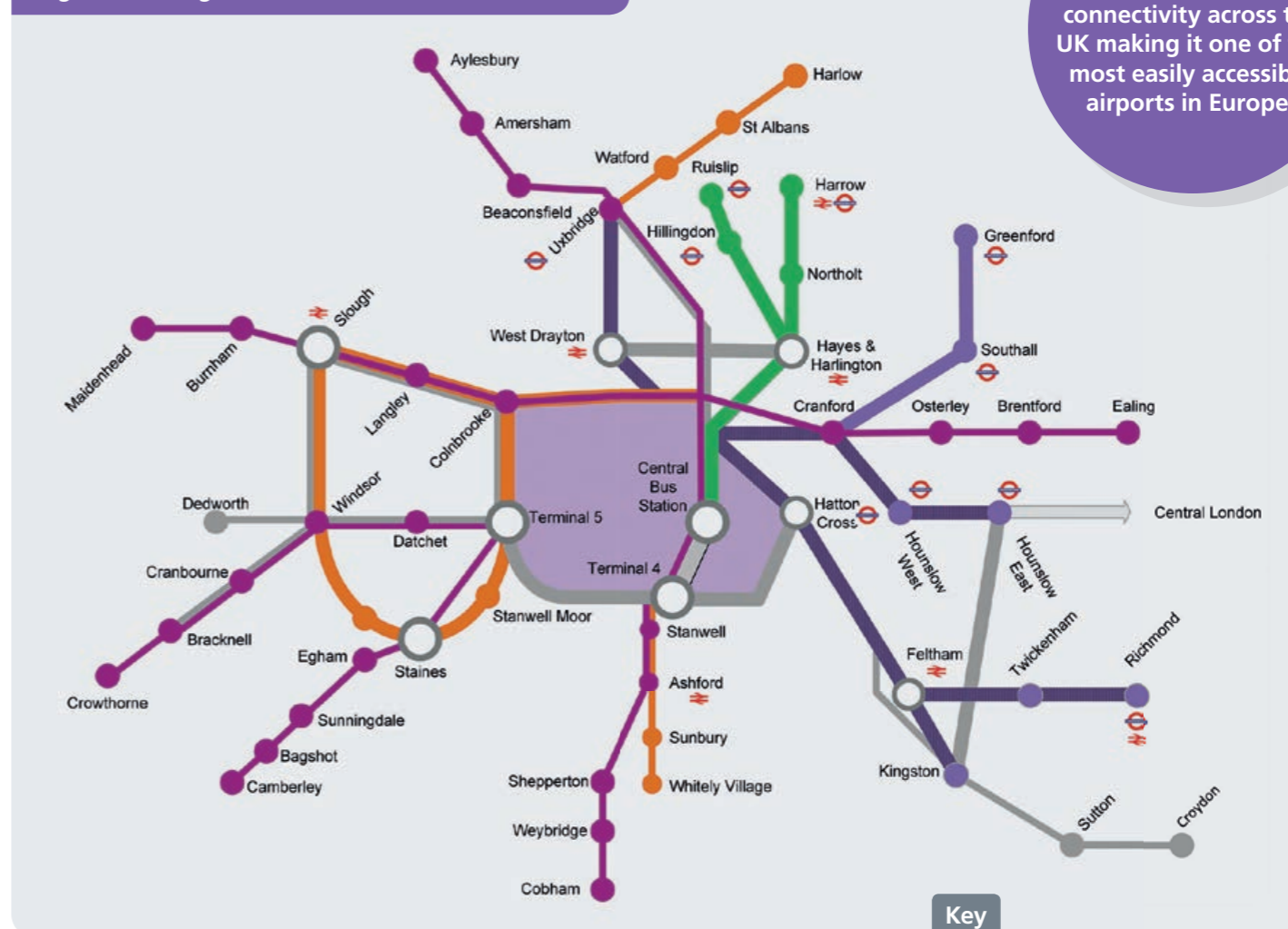
Bus and coach

As part of Heathrow expansion, we will enlarge and strengthen the bus and coach hub at Heathrow and improve the user experience, accessibility and quality of our coach and bus facilities.

We will continue to work with operators to increase coach frequencies to key destinations, with our priorities being routes to the South West, South Wales and the South Coast, as well as increased links to key rail stations where a direct rail service does not currently exist.

We will also work with operators to secure the delivery of new coach routes, potentially including new services to Kent, the North West, the East Midlands and Cambridgeshire.

Figure showing indicative future bus corridors



- Key**
- New Bus Routes
 - Potential Express Routes
 - Planned TfL New /Express Routes
 - Frequency Enhancement
 - New Southern Access Tunnel
 - Enhanced Operating Hours

Our surface access proposals will improve connectivity across the UK making it one of the most easily accessible airports in Europe.

We will work with operators to deliver new and improved bus routes and introduce more night buses to help support our colleagues who work early or late shifts. A focus of these improvements is to increase operating hours on services to and from Uxbridge, Hounslow, Kingston and Richmond, and the introduction of faster limited-stop services to Greenford and Hounslow.

We will work with operators to introduce new bus routes to improve links to the south and west of the airport in areas including Maidenhead, Bracknell, Surrey Heath and Elmbridge and ensure that passengers and colleagues from our surrounding communities can reach the airport without having to rely on their car. The proposed southern access tunnel to the Central Terminal Area will transform Heathrow's accessibility from south London and Surrey.

6.2. Colleague travel

We propose to fundamentally change how our colleagues get to, from and around the airport. We want to improve health and wellbeing by making public transport, walking and cycling the default choice for colleague travel, supported by new and improved services, better infrastructure and improved travel information.

We will reduce the number of car trips being made by colleagues and make it easier for colleagues who live locally to walk and cycle to the airport.

We will introduce new infrastructure for walking and cycling through our proposals, which you can see in **section 3** of this document. We will also relocate significant employment sites to locations where they can be easily accessed by public transport, on a bike or on foot.

To encourage colleagues to use more sustainable travel modes we are introducing new cycle lanes around the airport and expanding our flagship Heathrow Cycle Hub to new locations.

We are seeking to create safe cycling routes around the airport campus and on key routes in local communities where our colleagues live, including Hounslow, West Drayton, Hayes, Feltham, Staines and Slough.



6.3. Car parking

Expansion is an opportunity to make a step change in how colleagues and passengers arrive at the airport, and our car parking proposals play a key role in this and incentivising the use of cleaner vehicles.

The current amount of Heathrow-related car parking will not increase significantly with expansion but will over time be reallocated from colleague to passenger parking.

Colleague parking will undergo a phased reduction with passenger parking increasing, but with a reduction in the number of parking spaces per passenger from what we have today.

Our approach is to consolidate car parking at 'parkways'; areas around the airport with good access to the road network. This allows us to minimise congestion, reduce the amount of land we need for car parking and provide high frequency links directly to the terminals.

We will also increase our provision for electric and zero-emissions vehicles, to encourage drivers to use cleaner, less polluting, vehicles and are committed to reducing parking in residential streets around the airport.



We want public transport, car sharing, walking and cycling to be the default choice for staff travel, supported by new and improved services, better infrastructure and improved travel information. To achieve this, we will:

- provide targeted improvements in public and active transport options along corridors where colleagues live
- develop a public and active transport focussed masterplan that enables sustainable travel choices for colleagues
- provide appropriate parking management in line with the reduction in on-site car parking for colleagues over the period of expansion
- encourage non-car travel and reduce the need to travel



For further information on our car parking proposals **please see section 3 and section 7.7** of the **Preferred Masterplan** document.

6.4. Road user charging

At Heathrow today, there is no charge for vehicle access or drop-offs at our terminals. We recognise that we need to take bold action to meet our commitments to the environment and to local communities. To align with our pledge to deliver expansion with no more airport related traffic than today and to meet the targets in the Airports NPS, we are planning to introduce road user charges which will help to achieve these.

Our analysis shows that road user charges are necessary to achieve the targets in the Airports NPS and ensure we can keep the overall number of airport related vehicle trips static with levels today. We propose to introduce the charges in two phases.

Heathrow Ultra-Low Emissions Zone

As part of our proposals to expand Heathrow, we propose to introduce a 'Heathrow Ultra-Low Emission Zone' (HULEZ) by 2022, which will help us to manage emissions and encourage passengers to consider other modes of transport or cleaner vehicles.

The HULEZ will introduce minimum vehicle emissions standards identical to the London Mayor's ULEZ for passenger cars (passengers who park, as well as vehicles which pick-up or drop-off passengers) and private hire vehicles entering car parks or drop-off areas at any of Heathrow's terminals, 24 hours a day, 7 days a week. The HULEZ charge will not apply to those who live local to the airport or those travelling around the airport unless visiting airport facilities.

Registered Disabled Passenger Vehicles are proposed to be exempt from the HULEZ.

Heathrow Vehicle Access Charge

Following the opening of the third runway (around 2026) we propose to replace the HULEZ with the Heathrow Vehicle Access Charge (HVAC). The HVAC will apply to all passenger cars, taxis, and private hire vehicles entering the airport's car parks and terminal forecourts regardless of the vehicle's emission standard.

The main aim of the HVAC is to discourage car trips and help establish public transport as the primary means of travel to Heathrow. The charge will also generate revenue which can be used for further investment in improvements in public transport links, service, and coverage.

Blue badge holders will be able to claim a 100% discount from the HVAC. Private hire and taxi drivers will also have the opportunity to qualify for a discount if they register their vehicle with Heathrow based on how many times they 'backfill' return trips, which is explained in more detail below.



6.5. Taxi and private hire

Taxi and private hire will remain an important mode of travel to and from the expanded airport, providing access to areas with limited public transport options.

We want to ensure that taxis and private hire vehicles can continue to fulfil this role but with greater efficiency, minimising the number of vehicle trips being made and providing benefits to drivers through reducing empty mileage.

To do this, we want to increase 'backfilling'. This means that rather than a taxi or private hire vehicle arriving empty to pick up a passenger or leaving empty after dropping a passenger off, passengers are matched to drivers so that vehicles are full in both directions.

We will also encourage measures to promote taxi sharing, increasing the number of passengers each vehicle carries.

6.6. Freight

Our ambition is to maintain our position as one of Europe's best airports for cargo by improving our service and doubling our cargo capacity.

Increasing the amount of cargo at the airport will not mean doubling the number of vehicles or HGVs on the road. Our freight proposals are designed to minimise cargo vehicle trips and reduce the effects of those trips on the local community whilst improving the reliability and ease of use of cargo operations at the airport.

Our freight proposals focus on measures to increase the efficiency of cargo at Heathrow by enabling operators to consolidate cargo consignments onto fewer vehicles. Details of these measures are set out in Part 2 of our **Surface Access Proposals** document.

As part of our application to expand Heathrow, we will also provide two areas where drivers can wait off-street before being called up to the Cargo Centre when goods are ready for drop-off or collection. This will help reduce congestion and HGV parking on local roads.



For further information on our freight proposals please see **section 3** of this document and **section 7.6** of the **Preferred Masterplan** document.

6.7. Intelligent mobility

Intelligent Mobility is about using innovative technologies, ideas and data to improve the information and services that help people and goods to travel efficiently to, from and around the airport. This could include innovative transport modes like our existing Personal Rapid Transit system which operates fully automated vehicles at Terminal 5 or a single card (or smartphone app) which provides access to trains, buses, bikes and cars on demand.

We are proposing an Intelligent Mobility Strategy to improve passengers' journey experiences with informed travel choices to influence more environmentally sustainable travel. We think that Intelligent Mobility will support sustainable and seamless door-to-door journeys that reduce the total level of vehicle trips.

This will be done by providing personalised information to our customers and colleagues on a broad selection of transport modes at the appropriate time relating to their journey to Heathrow.

Our proposals focus on:

- Enhanced Mobility Information Services; and
- A Heathrow Travel Wallet

Enhanced Mobility Information Services will improve the timely communication of public transport information, which can allow for more sustainable travel choices. This will support passengers and colleagues in identifying sustainable travel options at the time when they most need it, enhancing their journey experience.

A Heathrow Travel Wallet for colleagues will allow us to manage, plan and incentivise colleagues' journeys to Heathrow, providing greater information on colleague movements and mobility needs.



Your views



We want to know what you think about:

- our surface access proposals and how we could further encourage or improve public transport access to the airport
- our proposals for the Heathrow Ultra Low Emission Zone and Heathrow Vehicle Access Charge as ways to manage congestion and air quality impacts

and any other comments you may have on our Surface Access Proposals

Please see **section 14** of this document for specific questions.



7. Managing the effects of expansion

We are committed to developing Heathrow responsibly and sustainably, with a focus on the wellbeing of our communities and the environment.

We are carefully considering the effects expansion may have on the environment and local people. We have planned measures to avoid or reduce these effects, or to improve the current environment wherever possible.

We have carried out a preliminary environmental impact assessment in line with legal requirements and the Airports NPS. The results of this assessment are summarised in this section and should help you better understand our proposals to reduce effects on our neighbours and the environment.

The PEIR is a preliminary environmental impact assessment (EIA) setting out our initial conclusions on the 'likely significant environmental effects' of the Project. Our DCO application will be supported by an Environmental Statement, which will report on the completed EIA. The PEIR represents a point in that assessment process when the design of the Project is still developing, the likely significant environmental effects are continuing to be assessed and the potential for measures to address environmental effects is still being considered and is being fed back into the design process.

The key aims of the EIA process are to understand current environmental conditions and how they may change in the future as a result of a proposed development. Those changes are assessed based on how "significant" they would be, in both positive and negative terms. The EIA process also identifies and incorporates environmental measures (often referred to as "mitigation") to avoid, reduce or offset any significant adverse effects. Identifying opportunities to enhance the environment through environmental design is also important.

EIA is a process which develops and adapts over a number of stages. Whilst some environmental measures are identified in the PEIR, continuing design development and feedback received from consultation will result in these being developed further to make them more effective. Our package of environmental measures is an area we are keen to receive feedback on through this consultation.

To make information on environmental effects more easily accessible, we have also set out how specific communities are affected by our proposals in a series of documents we have prepared for each local village called, '**Heathrow Expansion and Your Area**'.

In the pages that follow, we summarise our work so far, taking each environmental topic in turn.



Further detail on our assessments can be found in our **Preliminary Environment Information Report (PEIR)** and the **PEIR Non-Technical Summary (NTS)**.

7.1. Air quality and odour

Expanding Heathrow may affect people and places due to changes in air quality and odour.

The influence of Heathrow on air quality falls sharply with distance from the airport. In the area outside of the airport boundary, the main source of pollution that affects air quality is road traffic, the majority of which is not related to the airport.

Although the expansion of Heathrow will change and, in some places, increase emissions of air pollutants, our surface access proposals as described in **section 6** of this document will minimise these effects by increasing public transport use and cleaner more sustainable modes of travel to and from the airport. We will also manage emissions from aircraft by carefully designing the way the airport is laid out and designing aircraft stands that provide electricity and air to avoid the need for aircraft to use their engines whilst parked.

Aspects of our proposals that could cause effects

The activities required for the construction of the new north west runway, terminals, aprons and satellites, together with the works required to divert and construct new local roads, have the potential to affect the quality of air locally. This may be because of the extensive earthworks needed causing dust, as well as exhaust emissions from construction equipment and vehicle engines.

The flights and road traffic that will use an expanded Heathrow will produce emissions that could increase levels of pollutants in the air.

A summary of the effects reported in the PEIR

The greatest effects are likely to occur in areas to the north west of the existing airport, where earthworks will be required to prepare for the new runway. Construction sites will be established in this area, which will result in construction vehicle movements and emissions. Construction vehicles will remain on the motorway network wherever possible but will need to travel on the A4 to connect to work sites from the M4 motorway.

Due to the use of good practice measures contained in our **Draft Code of Construction Practice**, construction activities are predicted to cause no significant effects in relation to dust or odour. No significant effects in relation to NO₂ levels are predicted during the construction phase given the temporary nature of construction effects and the further work that will be done to manage road traffic during construction.

During operation of an expanded Heathrow, air quality is expected to improve with time because of the introduction of cleaner road vehicles and increasingly modern aircraft which meet tighter emission standards.

No significant effects are predicted in relation to PM and SO₂ emissions from aircraft, airfield activities and road traffic during construction or operation.

The increased number of flights will generate extra trips to the airport, but our surface access proposals, including improved public transport access, will mean that the effect on air quality will be minimised.

Measures for reducing potential effects

As outlined in **section 4** of this document, we will employ best practice measures that are used effectively at major construction sites across the country to limit emissions of dust and odour during construction.

A Construction Traffic Management Plan and Construction Workforce Travel Plan will be prepared and implemented to reduce the effect of construction road traffic.

The design of an expanded Heathrow includes proposals to help control and manage emissions. These include connections for stationary aircraft to use plug-in electrical power rather than their engines and electric vehicle charging equipment.

Our surface access proposals are vital to help manage the effects on air quality. Of importance for air quality are:

- A road user charging strategy which includes a Heathrow Ultra Low Emissions Zone and proposals for the introduction of a Heathrow Vehicle Access Charge
- Public transport proposals which increase the use of existing and committed public transport schemes to the airport
- Car parking proposals which will see a phased reduction in colleague parking with passenger parking increasing, but with a reduction in the amount of parking spaces available per passenger over time.

Air quality is the term used to describe the degree to which the air that people breathe is free of pollutants. The most important air pollutants in the UK in relation to health effects are nitrogen dioxide (NO₂) and particles (Particulate Matter, PM₁₀ and PM_{2.5}). Sulphur dioxide (SO₂) concentrations have also been considered in our assessment.



For further information on air quality and odour please see **Chapter 3.2** of the **PEIR NTS** and the **Draft Code of Construction Practice** document. For further information on our surface access proposals please see **section 6** of this document and the **Surface Access Proposals** document.

7.2. Community

The expansion of Heathrow presents both challenges and opportunities for our local communities. The effects on local communities and how these are considered and managed are really important to us in all aspects and characteristics, but in particular in relation to people, their homes, businesses, community facilities and services, environment setting, form and function.

Some community and recreational facilities such as sports pitches and allotments as well as public services like schools will be affected.

Aspects of our proposals that could cause effects

The construction and operation of the Project will affect the community in different ways. The Community assessment considers how Project activities will affect people, their homes, businesses, community facilities and services and environment.

Because land is needed for the construction and operation of the expanded airport, people and their homes will be displaced; so too will some community facilities and open spaces used by local people.

Construction activity may have effects on the local community in terms of changes to the housing market and the potential need to temporarily re-house some local people.

The increased number of flights to and from an expanded Heathrow will also result in environmental changes for local residents and their homes, as well as community facilities, local access routes, and their users.



A summary of the effects reported in the PEIR

The construction of the Project will require the acquisition of 756 homes and their residents will be displaced leading to a significant negative effect.

Changes to the environment during construction may mean that some people will be offered temporary relocation while works are carried out. This has the potential to be a significant effect, for example where people rely on living near to their family, work or community facilities such as schools.

The construction of the Project will mean that some construction workers will need to move to the area temporarily. This may affect the availability of homes in the local area, particularly rented homes.

Some community facilities will need to be relocated. We have considered how and where these facilities could move so that people who use them can continue to do so, as set out in **section 3.8** of this document. Changes to the environment might mean that community facilities experience different noise and other effects compared to today.

There may be negative effects on recreational spaces and routes during construction; however, these will be temporary. Following opening of the new runway positive effects are predicted as new recreational spaces and routes are provided; this will be permanent.

Expansion will change the communities around the airport, particularly the number of homes, community facilities and environment. This may change the way people feel about where they live, and physically change the nature of these places.

Measures for reducing potential effects

The preliminary assessment undertaken has identified the need for several measures that will avoid, reduce, mitigate or compensate for potential effects; these include:

- Replacement of community facilities, public open space (including sports facilities and allotments), and recreational routes (including public rights of way)
- Compensation for home-owners in the Compulsory Purchase Zone and Wider Property Offer Zone and other measures to help those who need to move home as a result of the expansion – see **section 10** of this document
- Measures to manage the way construction work is carried out and the number and behaviour of construction workers who may live in the area temporarily.

In addition, we have identified several opportunities for potential environmental measures to further reduce effects on the community:

- A Home Relocation Support Service to provide support services to guide and help owners and residents in the Compulsory Purchase Zone throughout the stages of the DCO application and the home relocation process
- An independent Resident Advice Service to engage with local residents and support their understanding and decision making
- A Construction Workforce Accommodation Strategy to reduce the potential effects on private sector housing and set out the measures to use project-sponsored accommodation to manage the construction workforce
- Welfare provision and occupational health services which will be provided within construction sites to reduce pressure on existing facilities or public health care services from workers not based at home

- A Community Fund which will be set up to deal with potential risks not yet known or will still be significant after additional mitigation is applied and to fund measures which improve local quality of life
- A Community Safety Management Plan which will be developed to promote community safety in the area during construction and operation.

We will work with the people who run community facilities and the people who use them, to identify the most appropriate way to ensure they can continue to provide services.

It is important that measures are in place to respond to the effects of the Project in each community around the airport. In some cases, this would include making sure that any public open space or community facilities required for the expansion would be replaced. In other cases, it will mean investment in the buildings and green spaces, encouraging businesses and making sure that the places that are important to people are protected.



For further information on our Preferred Masterplan proposals and how the Project will be constructed, please see **sections 3 and 4** of this document. For more information on community please see **Chapter 3.3** of the **PEIR NTS** and the **Heathrow Expansion and Your Area** documents.

For more information on the Community Fund and our Property Policies please see **sections 9 and 10** of this document.

7.3. Health

The health of our passengers, colleagues and neighbours is really important to us and we have carefully thought about the effects expansion may have on them.

Aspects of our proposals that could cause effects

The construction and operation of the Project will affect health in different ways. The assessment of human health considers how Project activities will affect health by changing the physical, social and economic environment.

Displacing homes, people, community facilities, businesses and recreational routes and spaces will affect health and wellbeing.

Construction activities can be noisy and dusty and may be noticeable for people who live close to the work sites.

Construction will require people and materials to be brought to site and there will be changes in traffic on the local traffic network.

Health is 'a state of complete physical, mental and social wellbeing and not merely the absence of disease or infirmity'

The construction workforce will bring economic benefits to local businesses but may also affect the availability of local services and community networks.

An expanded Heathrow will experience more flights. This will also change the environment and create increased employment opportunities.

Each of these factors can have an effect on health and how health services are provided.

A summary of the effects reported in the PEIR

Changes due to the Project may affect people's physical health and mental wellbeing. This may be the case where inequalities exist or for those who are more sensitive, such as children, the elderly, those already with long-term illnesses or who are less able to take up offers of support or access public services.

The potential for poorer health and wellbeing is greatest for those who are required to move home or have their education disrupted. The changing identity of the communities near the airport may affect how those remaining feel about their community, and in turn this may affect their health and wellbeing.

Open spaces, sports facilities and some walking or cycling routes will be affected by the land required. Replacements are proposed, but there may be times before they could be fully re-provided when people are less able to be physically active. Road works and changes in traffic will need to be managed to keep drivers, pedestrians and cyclists safe and enable the Project to successfully promote walking, running and cycling to the airport by colleagues.

Having construction activity and the construction workforce near local communities close to the site boundary or construction traffic routes may affect health and wellbeing. With regard to construction activity, this will be controlled by measures in the **Draft Code of Construction Practice** but may still be a source of concern even when within regulatory limits.

The economic and employment benefits of the Project are expected to have a long-term and major positive benefit for health, improving quality of life. Whilst there will be some businesses that close or relocate due to the Project's land requirements, the large opportunity for construction and operational jobs at the airport is expected to benefit local people and their families.

Although local air quality around the airport will meet national policy requirements, and the Project will be delivered in accordance with legal obligations in relation to air quality, this does not rule out the potential for health effects, specifically for those who are vulnerable to changes in air quality, such as younger people, older people and people with existing poor health.

The potential for health effects associated with noise is considered in the next section of this document.

Local health services may experience increased demand, particularly as numbers of airport passengers, visitors and colleagues increase. We are looking into how health services may need to be supported in the future. Construction workers will be provided with appropriate occupational health services, limiting their demand on local healthcare facilities.

Measures for reducing potential effects

Our initial assessment has identified additional measures that may be needed to avoid, reduce or compensate for potential effects on health. These include:

- Support for people in the Compulsory Purchase Zone and communities in the Wider Property Offer Zone (see **section 10** of this document)
- A Community Safety Management Plan for the construction and operation phases
- A Community Fund to mitigate environmental and social residual effects and to fund measures which add to local quality of life

There may also be changes in the availability of health services, planned future health infrastructure, or updates to health priorities. This will be reviewed and updated information incorporated in the Environmental Statement.



For further information on health please see **Chapter 3.4** of the **PEIR NTS**.

7.4. Noise

We know that noise is a very important issue for communities around the airport.

Noise effects of the airport today are primarily caused by the flights arriving and departing.

Despite an increase in the number of flights over the past few decades, our noise contour footprint (see the next page of this document for details on 'noise contours') has shrunk considerably and it is currently smaller than it has ever been.

Noise from arriving and departing aircraft can affect our local communities and we need to continue to manage noise effectively now and with the expansion of the airport.

We want to take the opportunities presented by expansion to adapt and improve some of the ways we currently manage noise.

To mitigate noise effects, we are developing improvements to how we use the runways. This includes:

- a runway alternation scheme to provide predictable periods of respite (by respite, we mean predictable relief from aircraft noise for a period of time, for local communities; see **section 5.1** of this document)
- a proposed 6.5 hour ban on scheduled night flights (see **section 5.2** of this document)
- a package of measures to reduce the effects of night flights between 11pm and 7am (see **section 5.2** of this document)
- quieter operating procedures such as 'steeper approaches' which will lead to quieter arrivals by aircraft to the airport.

We have also embedded in our design things like displaced landing thresholds and noise barriers to protect the closest communities from ground noise at the airport.

i For further information please see **section 5** of this document, the **Preferred Masterplan** document, the **Future Runway Operations** document and the **PEIR NTS**.

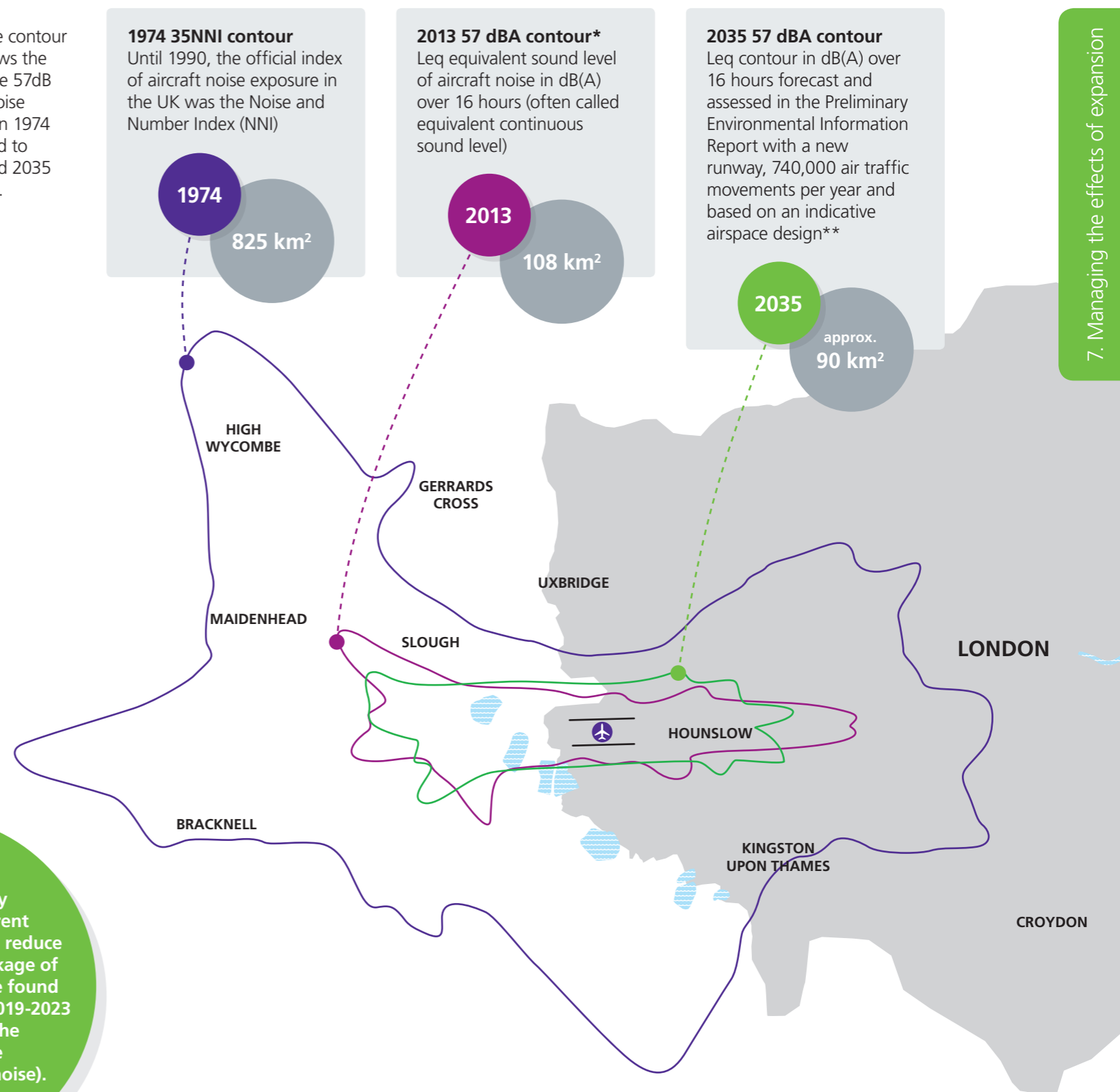
Steeper approaches mean aircraft on their approach to the airport follow a steeper descent than current procedures. This means aircraft are higher which reduces noise levels on the ground.

Displaced landing thresholds allow aircraft to land further down the runway, which means that they are higher as they approach the airport at all distances from the airport. This reduces noise at ground level.

i The noise effects of the expanded airport will be controlled by a legally binding 'noise envelope' as described **later in this section**.

Heathrow currently uses a range of different measures to manage and reduce noise. The complete package of existing measures can be found in the Noise Action Plan 2019-2023 and is available on the Heathrow website (www.heathrow.com/noise).

The noise contour map shows the size of the 57dB (LAeq) noise contour in 1974 compared to 2013* and 2035 forecasts.



* 2013 is the baseline year used in the Airports NPS.

We have used 2013 because this is the year used for assessments on noise in accordance with the Airports NPS. Please see the **PEIR** or the **PEIR NTS** for more information.

** Airspace design separately approved by CAA

Noise policy and presenting noise information

A noise contour is either a line on a map that represents equal levels of exposure to noise or an area on a map within which exposure to noise is greater than a specified value. We have published our noise contours annually for many decades and the 57 dB(A) Leq daytime contour has been used to track our noise performance over time. The terms db(A) and Leq are described on the next page.

Over the last few years, government noise policy has tightened. For our DCO and airspace change proposals we are now required to provide details of:

- noise effects where aircraft fly below 4,000 ft;
- noise information (in airspace change proposals only) where aircraft are between 4,000 and 7,000 ft;
- noise effects on health and quality of life where noise exceeds the following:
 - Lowest Observed Adverse Effect Levels (LOAELs), defined by Government as 51 dB(A) Leq during the day and 45 dB(A) Leq at night;
 - Significant Observed Adverse Effect Levels (SOAELs);
 - Unacceptable Adverse Effect Levels (UAELs).

The figure alongside presents our noise levels in 2013 showing these required details.

Aspects of our proposals that could cause effects

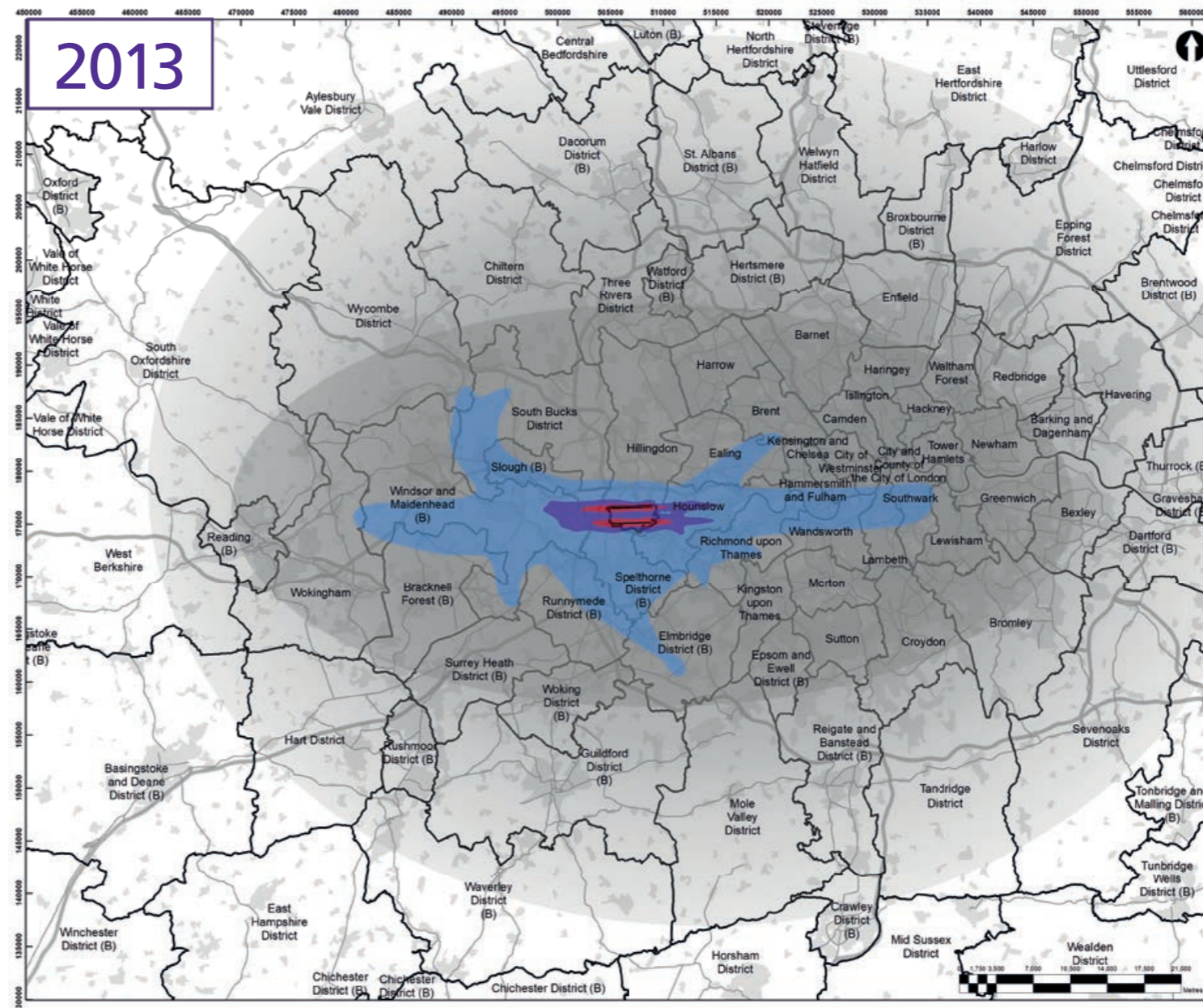
Construction may cause an increase in noise for those people living in homes closest to the areas being developed.

The increased number of flights and the operation of a third runway will result in changes in noise from aircraft in the air and aircraft on the ground. Some communities will be newly exposed to aircraft noise.

There may be changes in road and rail traffic noise associated with new or altered roads or railways associated with an expanded Heathrow.



For further information regarding indicative airspace design please see **section 11** and the **PEIR Chapter 17: Noise**.



7,000ft
Aircraft may be noticeable.*
Depends on existing noise.
No adverse effect on health and quality of life. Very dependent on airspace design.

4,000ft
Aircraft noticeable.*
No adverse effect on health and quality of life. Very dependent on airspace design.

LOAEL
Aircraft noise may be intrusive.* May be adverse effect on health and quality of life. Dependent on noise level, change in noise level and population. Mitigate and minimise effects. Dependent on airspace design.

SOAEL
Aircraft noise may be disruptive.* Mitigate and compensate to avoid significant adverse effect on health and quality of life.

UAEL
Aircraft noise may be very disruptive.* Compensate to prevent unacceptable adverse effect on health and quality of life.

* Likely average response.

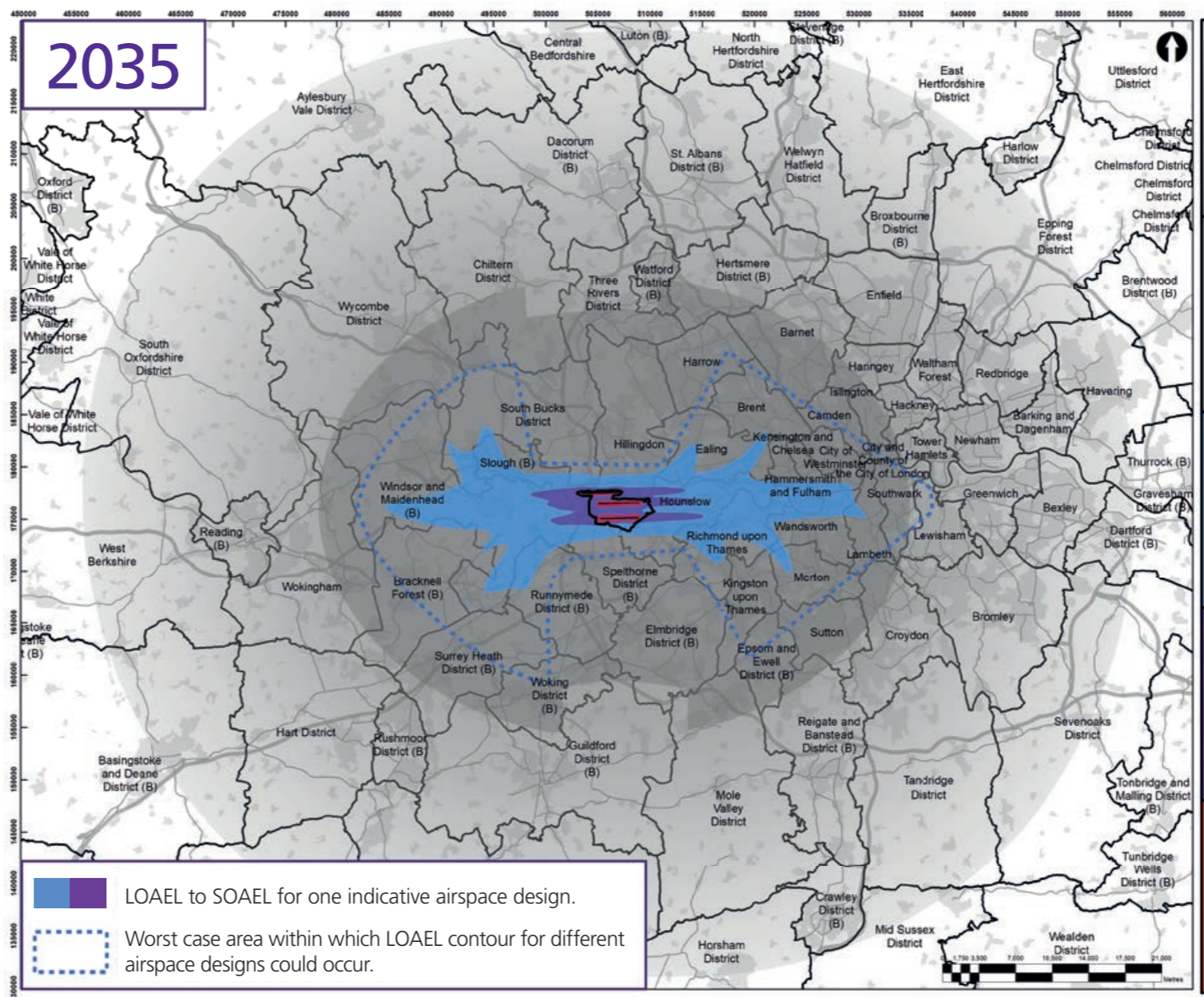
The **Lowest Observed Adverse Effect Level (LOAEL)** is regarded as the point at which adverse effects begin to be seen on a community basis. As noise exposure increases above this level, so will the likelihood of experiencing an adverse effect. In line with this increase in risk, the proportion of the population likely to be significantly affected can be expected to grow as the noise level increases over the LOAEL. Noise is likely to be noticeable and may be considered intrusive. Government policy requires such adverse effects to be mitigated and minimised in the context of policy on sustainable development. The impact of the Project depends on the change in noise caused, the resulting noise levels and the number of people affected.

The **Significant Observed Adverse Effect Level (SOAEL)** is the level above which significant adverse effects on health and quality of life can occur. As noise levels increase above SOAEL, they may become disruptive (e.g. avoiding certain activities during periods of intrusion; where there is no alternative ventilation, having to keep windows closed most of the time because of the noise; potential for sleep disturbance). Government policy requires significant adverse effects to be avoided in the context of policy on sustainable development.

The **Unacceptable Adverse Effect Level (UAEL)** is the level above which unacceptable adverse effects on health and quality of life can occur. As noise levels increase above UAEL, they may become very disruptive (e.g. regular sleep deprivation/awakening). Government policy requires unacceptable adverse effects to be prevented from occurring.

i The term “dB(A)” indicates that the decibel (dB) level is A-weighted to approximate the human ear’s sensitivity to sounds of different frequencies.

The term “Leq” is known as the equivalent sound level. It describes a person’s cumulative exposure to all sound occurring over a certain period (for example, a 16 hour day or an 8 hour night). It is the primary indicator used around the world by governments, researchers and non-government organisations such as the World Health Organization to describe community response to noise.



- 7,000ft**
Aircraft may be noticeable.*
Depends on existing noise.
No adverse effect on health and quality of life. Very dependent on airspace design.
 - 4,000ft**
Aircraft noticeable.*
No adverse effect on health and quality of life. Very dependent on airspace design.
 - LOAEL**
Aircraft noise may be intrusive.* May be adverse effect on health and quality of life. Dependent on noise level, change in noise level and population. Mitigate and minimise effects. Dependent on airspace design.
 - SOAEL**
Aircraft noise may be disruptive.* Mitigate and compensate to avoid significant adverse effect on health and quality of life.
 - UAEL**
Aircraft noise may be very disruptive.* Compensate to prevent unacceptable adverse effect on health and quality of life.
- * Likely average response.

A summary of the effects reported in the PEIR

During construction, noise will significantly affect some residents, schools and places of worship in areas closest to the new runway. This is due to the scale of construction and also the need for extended and 24-hour working in some locations.

No significant effects have been identified relating to the increased (early growth) flights that are proposed before the third runway becomes operational (see **section 5.4** of this document). Whilst some noise changes will be noticeable during this period, these result from changes in airspace design that will happen with or without expansion. With early growth there would only be very small changes to the overall noise level given that the additional flights will be spread across the day.

An expanded Heathrow will result in changes in noise exposure that will influence health and quality of life – both positive and negative changes. The figure above presents forecast noise from an expanded Heathrow, based on one of our indicative airspace designs, using the Government’s thresholds for noise effect on health and quality of life set out earlier.

For some residents, the effects of Heathrow expansion will be positive and significant, with a large number of people experiencing a reduction in exposure to aircraft noise. These reductions are associated with mitigation such as the proposed 6.5 hour ban on scheduled night flights (see **section 5** of this document), displaced threshold landings on the existing runways and a package of measures to reduce the effects of night flights between 11pm and 7am.

For some other residents, even taking account of the mitigation proposed, the effects of Heathrow expansion will be negative and significant, with a large number of people experiencing increase in exposure to aircraft noise. For some, the third runway will mean that they have aircraft flying over them for the first time.

With a third runway, and taking account of proposed noise mitigation measures, the PEIR reports that fewer residents would be exposed to noise levels in the daytime that are above the level where significant community annoyance begins compared to the 2013 baseline set by the Airports NPS. This reflects the aim of government noise policy to improve health and quality of life, where possible.

Significant effects from aircraft ground noise have been identified for some residents adjacent to the new runway and taxiways.

There will also be significant effects from changes in road traffic noise for some residents, associated with new or altered roads linked to the expanded airport.

No significant effects of railway noise have been identified as part of the construction or operation of an expanded Heathrow.

Measures for reducing potential effects

Our approach to noise management has been developed to mitigate and minimise noise effects from construction, aircraft, road and rail, and then avoid any residual significant effects.

All airport construction activities will follow a Code of Construction Practice. This will include measures to reduce noise and the other environmental effects of construction. The **Draft Code of Construction Practice** document is available as part of this consultation and is discussed in **section 4** of this document.

To reduce the effects of aircraft noise, we are proposing to introduce a 6.5 hour ban on scheduled night flights and are planning to rotate the use of our runways to offer predictable breaks from noise, also known as respite.

We are also designing noise screens around the airport to provide a barrier for communities nearby from aircraft ground noise and controls over where and when aircraft maintenance activities can take place.

We understand that even after applying best practice in design and introducing necessary mitigation measures, some local people will still be affected by noise. We have therefore developed a **Noise Insulation Policy** to compensate those most affected.



Mitigating and minimising adverse effect of noise on health and quality of life and the ICAO Balanced Approach



We have to select noise management controls in accordance with Government noise policy and in line with the "Balanced Approach to Aircraft Noise Management", and international policy produced by ICAO (International Civil Aviation Organisation).

The goal of the Balanced Approach is to identify the noise-related measures that achieve maximum environmental benefit most cost-effectively, using objective and measurable criteria. The need to apply the Balanced Approach is a legal and policy requirement.

The key principles of noise policy and the Balanced Approach are that non-restrictive measures (such as incentivising the use of quieter aircraft and requiring aircraft to use quieter operating procedures) are applied first as far as reasonably practicable, then compensatory noise insulation is provided at homes and community buildings, before finally considering the introduction of any measures that restrict airline operations.

Noise objective

At the Airspace and Future Operations Consultation in January 2019 we presented our proposal for a noise objective that we intend to use as a guiding principle for future noise management. As part of our DCO application we will submit our proposal for a noise objective to the Secretary of State for consideration, as it is the Government's responsibility to set noise objectives for airports.

The Secretary of State will set the objective and it will then be used to inform future decisions about managing operational noise at an expanded Heathrow.

Following the analysis of the feedback received, we have changed our proposed noise objective and aligned it with the requirements of the ICAO Balanced Approach.

Our updated noise objective is:



"To limit and, where possible, reduce the effects of noise on health and quality of life and deliver regular breaks from scheduled flights for our communities during the day and night. We need to do this whilst making sure the measures we put in place are in line with the ICAO Balanced Approach."



For more information on the feedback received and how they have been used please see our **Future Operations Consultation Feedback Report**.

Noise Insulation

We will offer noise insulation for eligible properties that will be most affected by noise during construction and operation of the expanded airport.

We will offer three schemes, each one to address slightly different circumstances.

- Scheme 1 – for eligible properties affected by aircraft noise, a full package of sound insulation to habitable rooms
- Scheme 2 – for eligible properties to address noise from construction, road or rail sources
- Scheme 3 – a £3000 contribution to a package of sound insulation treatment.

We are proposing to seek powers within our DCO application to be able to carry out noise insulation works compulsorily should that be necessary for properties at the end of the new runway.



For more information on the schemes please see the **Noise Insulation Policy** document.

Managing aircraft noise into the future

A central part of our plans to manage noise from aircraft at Heathrow in the future is the noise envelope.

What is the noise envelope?



The noise envelope is a set of legally binding and enforceable limits and controls to manage noise in the future while allowing the airport to grow. It will provide certainty both now and in the future. It will be reviewed after an agreed period.

It will be designed to protect communities while enabling the airport to operate efficiently and allow it to grow within these limits. It will deliver real benefits that can be shared between communities, consumers, and businesses during each stage of growth.

This framework could include:

- Noise management controls;
- The rules we will put in place to use them (agreed through the DCO process and approved by the Secretary of State for Transport);
- The ways their effectiveness will be measured and how Heathrow's performance will be communicated;
- How the rules and controls will be enforced and validated; and
- The time period for review

The noise envelope will include:

- Enforceable limits that will bound airspace change and Heathrow operations
- Local priorities
- The mechanisms for sharing future technological improvements between airport growth and reducing noise impact on communities.

The Airports NPS requires us to develop the noise envelope with local communities and other stakeholders, something we are doing with an independently chaired Noise Envelope Design Group. Following feedback on our Airport Expansion Consultation in 2018, the group is made up of a small number of technical experts representing the interests of communities, passengers, local authorities and airlines.

The noise envelope is part of our plans for Environmentally Managed Growth at Heathrow, where increases in aircraft and passengers are only permitted if they are within strict environmental limits.



For more information on our framework for **Environmentally Managed Growth** please see **section 8** of this document and our **Environmentally Managed Growth** document.

7.5. Socio-economics and employment

Heathrow is a cornerstone of the local economy and we are one of the largest single-site employers in the country. Over 70,000 people work onsite at the airport, across more than 400 businesses. Expansion will provide a range of new employment and training opportunities but will also require a number of existing commercial uses to be removed or relocated.

We are committed to recruiting, training and managing apprentices across a network of companies and suppliers operating at the airport to help people pick and develop an exciting career, not just a job.

As part of our DCO application, we will set out a plan to implement our commitment to deliver a total of 10,000 apprenticeships at an expanded airport.

In early 2019 we launched our Shared Apprenticeship Scheme which will give apprentices the opportunity to learn and develop a broad range of skills and experiences.

A new 'Skills Passport' will also be trialled which logs the achievements of the apprentices. This will help to facilitate the transfer of skills and experience to other major UK projects.

On top of this, 1,200 work placement days for local T-level students in construction and digital careers will be implemented from September 2020.

We have also committed to providing 10,000 work experience days by 2030, including for people with additional learning needs and disabilities, older job seekers and groups facing barriers to employment and progression.

Aspects of our proposals that could cause effects

The increased number of flights and passengers at an expanded Heathrow will result in additional jobs and opportunities for enhancing skills and training, as well as benefits to the wider economy.

The land required for the construction and operation of the Project will result in displacement of some businesses and commercial activity, as set out in **section 3.8** of this document. Changes to the operation of the transport network may result in changes to the catchment area (labour and businesses) and the ability of local residents to travel to work.

A summary of the effects reported in the PEIR

The construction of the third runway will result in significant positive effects on the labour market by providing jobs, opportunities for enhancing skills and training and creating opportunities for businesses in the supply chain.

Construction will also result in the disruption of businesses and commercial activity, either because the business is displaced or because it affects the viability of the businesses. Residents' ability to travel to work may be affected by changes to the local transport network.



For further information on socio-economics and employment please see **Chapter 3.6** of the **PEIR NTS** and the **Economic Development Framework** document.

At this point in the EIA process it has not been possible to fully assess all of the likely significant effects, and so these will be considered further prior to the DCO application being made, and any significant effects will be reported in our Environmental Statement.

An expanded Heathrow will result in a significant increase in the number of direct jobs onsite, as well as other Heathrow-linked jobs in the wider economy. This provides opportunities for enhancing the skills and training of both new and existing members of the workforce. There are also related potential positive effects as a result of the increased trade, Foreign Direct Investment and tourism associated with Heathrow.

Further work will be done to understand the nature of the commercial businesses that are likely to be displaced or disrupted, although the overall effect of displacement of commercial properties is found to be not significant.

The Socio-economics and employment assessment includes the effects on commercial land and property, businesses, employment, skills, training and the labour market, as well as the wider economy.

Measures for reducing potential effects

As part of this consultation, we are seeking views on an Economic Development Framework which sets out the approach we intend to take to maximise the economic benefits of the Project. We will work with partners and take account of views raised in this consultation, to develop the Economic Development Framework into an Economic Development Strategy to be included with our DCO application.

The Economic Development Strategy will set out an overarching strategy which seeks to enhance the skills, employment, training and education for both new and existing members of the labour market. This will include a credible plan to implement our commitment to deliver a total of 10,000 apprenticeships at an expanded airport and a skills, education and training action plan. The Strategy will also include an action plan which seeks to maximise supply chain benefits, innovation inward investment and tourism.



7.6. Transport network users

Expansion will mean a number of substantial changes to the local road networks and the placing of the M25 in a tunnel under the new runway. These changes have been considered in detail as part of the surface access proposals for an expanded Heathrow and are explained in section 3.3 of this document.

We have assessed the effects of the Project on users of the local transport network, in particular pedestrians, cyclists, public transport users and vehicle drivers and passengers.

Aspects of our proposals that could cause effects

The construction of new roads, the diversion of existing roads and other works to move services will lead to both temporary and permanent effects on people as they travel on the transport network.

Other construction activity, including additional trips produced by construction vehicles and workforce travel, may also lead to disruption for travellers.

Increased passenger and colleague numbers and other operational changes at the expanded Heathrow, such as the location of car parks, terminals and servicing will lead to changes in travel patterns, which could result in effects for transport network users.

A summary of the effects reported in the PEIR

At this point in the EIA process a number of potentially significant effects (both positive and negative) have been identified. These conclusions will be refined in the Environmental Statement, taking into account detailed design information.

The construction and operation of the Project will lead to changes in traffic on a number of existing roads.

In some locations this may result in potentially significant negative effects, such as by making it more difficult for pedestrians and cyclists to cross the road and increase their feeling of risk from traffic. At locations where there are existing instances of accidents, changes in traffic may lead to changes in road safety, which could result in an increase in accidents at some locations and a decrease in accidents at others.

The introduction of the M25 tunnel will result in a loss of view of the surrounding landscape for vehicle drivers and passengers as they pass through the tunnel.

Changes in traffic volumes and speeds will also result in changes in driver stress at various locations, which is expected in some cases to be positive and in some negative.

Although an increase in crowding is forecast on services between some Network Rail and London Underground stations, including on the Piccadilly line and other services, these changes are forecast to be small and will generally not reduce passenger comfort or make journeys less pleasant.

Measures for reducing potential effects

We will prepare and implement a Construction Traffic Management Plan that will include traffic management measures and controls on construction vehicle types, hours of site operation and delivery routes for goods vehicles.

We will also prepare and implement a Construction Workforce Travel Plan that will include measures to encourage the use of sustainable travel modes by construction workers.



For more information please see **section 13** of the **Draft Code of Construction Practice** document, the **Preliminary Outline Construction Traffic Management Plan** and the **Preliminary Outline Construction Workforce Travel Plan**.

A Surface Access Strategy is being prepared and will be implemented. The Surface Access Strategy will detail how surface access to and from the airport will operate and be managed, including measures designed to promote the use of public transport and active travel and make more efficient use of vehicles. Further information on our surface access proposals is set out in **section 6** of this document.

All new roads and junctions will be designed with consideration for the safety of all travellers, and improvements such as cycle lanes, wayfinding, controlled crossing points and footway improvements will be included where appropriate.

Our plans for a Green Loop around the airport will provide new links for walking and cycling between nearby communities and into the airport via parkways – see **section 3.9** of this document.

Where possible, replacement roads will be built offline from the existing routes to minimise disruption to transport network users.

As outlined in **section 4** of this document, good practice environmental measures will also be employed to minimise the effects associated with the construction of the Project. These measures are included in the **Draft Code of Construction Practice** and examples include minimising the closure of pedestrian and cycle routes, and when closures are necessary ensuring that suitable alternate routes are provided. Other measures include maintaining access to properties, and the designation and enforcement of construction traffic routes to minimise the effect on local communities.



For further information on transport network users please see **Chapter 3.7** of the **PEIR NTS** and the **Surface Access Proposals, Construction Proposals and Draft Code of Construction Practice** documents.

Artists impression of the Green Loop



7.7. Biodiversity

We are committed to better understanding and reducing the effects of expansion on wildlife habitats and species, known as biodiversity. As part of this, we have set ourselves an objective to achieve a net gain in biodiversity, with more wildlife habitat than before expansion.

Our preliminary assessment has considered the designated wildlife sites, habitats and species within the area that expansion could affect.

Aspects of our proposals that could cause effects

The construction of the new runway, terminals and aprons, together with the works required to divert and construct new local road connections and rivers and provide supporting infrastructure, will result in direct physical effects as well as indirect effects on biodiversity. These effects are more likely to occur during construction, but some may happen during the operation of the expanded airport.

The increased number of flights that will use an expanded Heathrow will also result in additional noise that may disturb wildlife.

A summary of the effects reported in the PEIR

The construction activity associated with the Project will result in the loss of some habitats across the area, including within the Colne Valley Regional Park, Staines Moor Site of Special Scientific Interest and a number of Local Wildlife Sites. This habitat loss will also result in wildlife being lost or displaced from areas on which they have depended for foraging, sheltering or as movement corridors.

The presence of people, artificial lighting and the noise associated with activities during both construction and operation of the airport will also result in the displacement of wildlife. Although this does not always mean loss of habitats it can effectively stop some wildlife from using these areas.

New structures and buildings will change the distribution of water (either within the ground or moving across the surface) in the environment. Structures such as basements, the lining of new river channels and the control of water running off new sealed surfaces can all change the water environment locally. For some habitats this can alter their nature and result in a transition between different forms (for example a change from a wet woodland to a dry woodland, thereby changing the associated plants and animals).

The use of road vehicles, specialist equipment and aircraft all lead to the production of exhaust emissions. These emissions all include nitrogen oxides that can damage plants, as well as adding additional nutrients to the system. These additional nutrients favour certain habitat types over others (for example adding nutrients to heathland encourages grasses to become more dominant).

Measures for reducing potential effects

The design of the Project includes large areas of multi-functional green infrastructure that will be created to benefit both wildlife and people. The areas of green infrastructure will be designed to increase the connectivity of the semi-natural habitats within the locality, whilst providing high quality habitats for sheltering and foraging.

Our commitment to biodiversity net gain for the Project will be demonstrated through the use of biodiversity offsetting. This allows for the losses associated with the construction and operation of the Project and the gains to be made through the delivery of green infrastructure to be measured and reported in a consistent and transparent way.

The types of habitats provided will be suitable for bats, otters, birds, reptiles and invertebrates, as well as a wide range of other flora and fauna. These habitats will be delivered, monitored and managed in the long term to ensure habitats lost to the development are able to be replaced or compensated and that the commitment to biodiversity net gain is met.

In addition to the green infrastructure described within the consultation documents, Heathrow is actively speaking with a number of potential partners to deliver additional green infrastructure in the wider area.



For further information on biodiversity please see **Chapter 4.2** of the **PEIR NTS**.

Biodiversity offsets are conservation activities that are designed to give biodiversity benefits to compensate for losses - ensuring that when a development damages nature (and this damage cannot be avoided or mitigated) new nature sites will be created.



7.8. Historic Environment

The expansion of Heathrow presents challenges but also opportunities for historic places, buildings and landscapes that people value.

The historic environment includes archaeology, structures, listed buildings, conservation areas and the historic character of the landscape

Expansion requires land that results in the loss of historic settlements, individual buildings, landscape character and archaeological remains. It also involves new development and additional aircraft movements that affect the character of remaining conservation areas and historic parks and gardens. The setting (or surroundings) that contributes to the experience and understanding of listed buildings may also be affected, as well as the significance of scheduled monuments.

Aspects of our proposals that could cause effects

The construction of the new runway, terminals and aprons, together with the works required to divert and construct new local roads, create new Parkways and provide additional or replacement airport development, have the potential to alter the heritage significance of historic villages in the immediate vicinity of the Airport.

The increased number of flights that will use an expanded Heathrow will also result in additional noise that potentially affects the contribution that setting makes to the experience and understanding of Registered Historic Parks and Gardens along the Thames.

A summary of the effects reported in the PEIR

The construction of the Project will result in the loss of part of Harmondsworth Conservation Area and some listed buildings within it. In the Longford area, all designated built heritage assets and the Conservation Area will be lost.

Heritage assets of archaeological interest within the construction footprint will also be lost and there is the potential for significant effects on remaining historic landscape character.

Construction in the vicinity of Harmondsworth, Colnbrook, Sipson, Harlington, Stanwell, Stanwell Moor and East Bedfont will alter the ways in which historic buildings and conservation areas are experienced.

During operation of an expanded Heathrow, noise levels may change for several historic buildings and landscapes resulting in the potential for significant effects:

- To the east of the airport: the Royal Botanic Garden World Heritage Site at Kew, Chiswick House, Syon Park, Richmond Park, Osterley Park, Richmond Terrace Walk and Terrace and Buccleuch Gardens (Grade II) ;
- To the west of the airport: six Registered Historic Park and Gardens of the Royal Estate Windsor, and two those at Eton College and Ditton Park.

Potential improvements may be achieved by measures that connect historic places and enhance the public realm.

Measures for reducing potential effects

The proposed runway has been carefully positioned to retain the historic High Street and the more significant built heritage assets of the Harmondsworth conservation area. None of the development proposals negatively affect either of the Mayfield Farm designated historic sites.

We are proposing four historic environment strategies that will address effects on the historic environment and which provide a framework for developing additional measures to make a positive contribution to the historic environment. These include:

- A Heritage Management Strategy to protect heritage assets during the construction process;
- A Heritage Design Strategy to embed urban, architectural and landscape design approaches appropriate to the historic environment;
- The Heritage Interpretation Strategy to celebrate the locally distinctive environment in the design of recognisable places;

- The Historic Environment Research Framework and Historic Environment Overarching Written Scheme of Investigation for archaeological research and investigation.

In addition, we have identified several opportunities for potential environmental measures to further reduce effects on the historic environment:

- Using design, architecture and landscaping to take account of the local heritage qualities and protect adjacent conservation areas;
- Creating Harmondsworth Park Visitor Centre – a new community facility focussed on the Great Barn and St Mary’s Church;
- Making beneficial use of residential historic buildings and the Conservation Area in Harmondsworth;
- Providing information about the historic environment and landscape within the Green Loop for pedestrians and cyclists, connecting heritage to Public Open Space;
- Implementing traffic reduction measures for conservation areas likely to be affected by surface access changes.

Feedback from previous consultations

Following feedback from Airport Expansion Consultation One in January 2018 and engagement with the Heathrow Strategic Planning Group, we have reduced the amount of development in the Mayfield Farm area.

This will help to minimise effects on the setting of the Scheduled Monuments and avoid conflict with the London Borough of Hounslow’s aspirations for mixed use development, as set out in their emerging West of the Borough Plan.



For further information on historic environment please see **Chapter 4.3** of the **PEIR NTS** and the **Heathrow Expansion and Your Area** documents.



7.9. Land quality

Minimising effects on land quality is an important consideration in the design and operation of the Project. Land quality covers not only the cleanliness of the soil, but also agricultural land quality and mineral resources. Some areas have been landfilled with waste in the past and there is potential for contamination. Many of these sites will be improved by the earthworks to construct the Project.

We are committed to using land in a way that manages risks to human health and the environment and limits significant adverse effects on good quality agricultural land, soils and mineral resources such as sand and gravel.

Aspects of our proposals that could cause effects

Land contamination effects could be caused by the presence of existing contamination in soils and water or through pollution of the environment during construction activities.

There may be effects on agricultural land and mineral resources where newly created airport facilities are built on best and most valuable agricultural land or land which contains sand and gravel resources which could be excavated for use in construction.

A summary of the effects reported in the PEIR

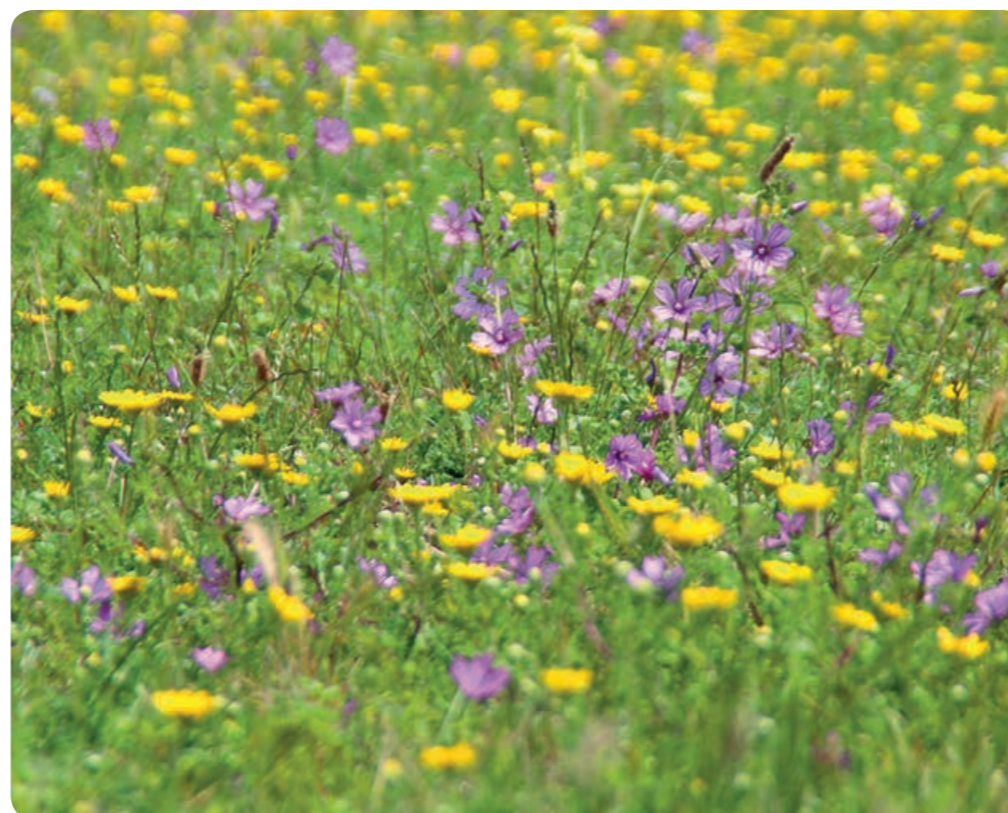
A significant positive effect will occur as a result of removing or cleaning up a large amount of existing contamination. This will ensure that land is suitable for the proposed use within the Project.

Significant adverse effects are expected to occur as a result of the permanent loss of good quality agricultural land. There is a risk that certain sand and gravel mineral resources could be lost as a result of the land required for the Project, in a worst case scenario.

Measures for reducing potential effects

A range of environmental measures have been embedded into the Project design to minimise the land quality effects, including the use of poorer quality agricultural land for the expansion of Heathrow rather than that of a higher quality where possible. We also intend to extract mineral resources for use in the Project where practicable, reducing the risk that these resources would be lost.

In addition, good practice environmental measures have been employed through the **Draft Code of Construction Practice** to minimise land quality effects. This includes storing materials appropriately to minimise the risks from accidental spillages and leaks and the removing of good quality soils, sand and gravel, prior to construction for reuse, where possible, within landscaping schemes and green spaces.



For further information on land quality please see **Chapter 4.4** of the **PEIR NTS** and the **Draft Code of Construction Practice**.

7.10. Landscape and visual impact

We want to ensure that as we expand Heathrow we take account of any effects on the character of the landscape and views.

Aspects of our proposals that could cause effects

The construction and operation of the new runway, terminals and aprons, and related development, together with diverted and new local road connections, has the potential to result in direct physical effects as well as indirect effects on landscape character and visual amenity.

The increased number of flights that will use an expanded Heathrow has the potential to affect the tranquillity of the landscape and affect views.

A summary of the effects reported in the PEIR

Our preliminary assessment concludes that as a result of construction or operation of the Project there will be some significant negative effects on landscape and views (those who will have a view of an expanded Heathrow).

These effects will occur due to the physical development and operational procedures described above.

Landscape effects are primarily expected to occur within landscapes and townscapes at and between Cranford and Harmondsworth, within the Colne Valley between Harmondsworth and Stanwell, and within townscapes at and between Stanwell and Feltham.

Effects on views are mainly expected in the areas of Harlington to Harmondsworth, Poyle to Colnbrook, Richings Park to Brands Hill, and Stanwell to Bedfont.

Measures for reducing potential effects

Environmental measures employed to limit landscape and visual effects during construction will include:

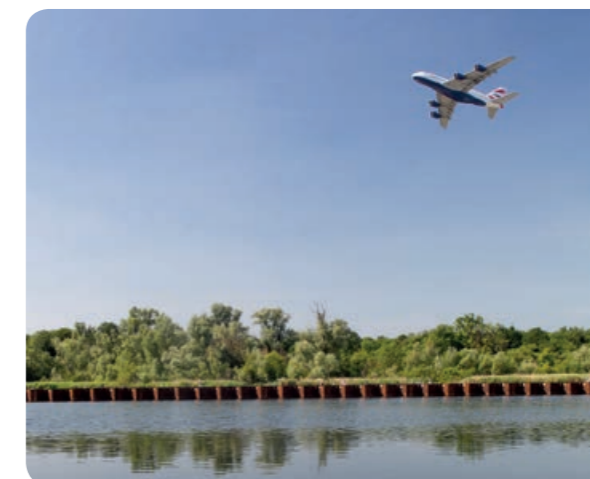
- The protection of existing trees and other vegetation that is to be retained;
- The management of site lighting;
- Carefully planned and well-maintained temporary earthworks;
- Hoardings and fencing to minimise disturbance.

Limiting landscape and visual effects during operation will be achieved through a commitment to good design of the built environment, public realm, landscape and green infrastructure relating to the Heathrow expansion. These measures are integral to the Project's design, as set out in the Preferred Masterplan document, and we propose to commit to a set of Design Principles at DCO application stage.

We are developing a Landscape Strategy which is driven by our ambition to become one of the most sustainable hub airports in the world.

As part of this, we have developed and are consulting on a Landscape Toolkit, which sets out guidelines to achieve our emerging Landscape Strategy. Our Toolkit offers devices such as 'ecological woodland' or 'biodiverse grassland' and guidelines to describe how good design will be secured.

A key part of our emerging Landscape Strategy is the planned Green Loop which is expected to stretch for 20km around the airport. The Green Loop will improve connectivity around the airport perimeter, linking up communities, landscaped areas, public open spaces and biodiversity sites with walking and cycling routes.



For further information on our landscape design approach please see **section 3.9** of this document and the **Preferred Masterplan** document which contains our **Landscape Toolkit**.

7.11. Water environment

The expansion of Heathrow will affect the existing water environment (rivers, lakes and groundwater). It also offers opportunities for the improvement of the local water environment, through the design of the newly diverted rivers, river improvement works in the Colne and Crane Valleys and the use of new flood storage areas as multifunctional spaces for biodiversity and public open space.

Aspects of our proposals that could cause effects

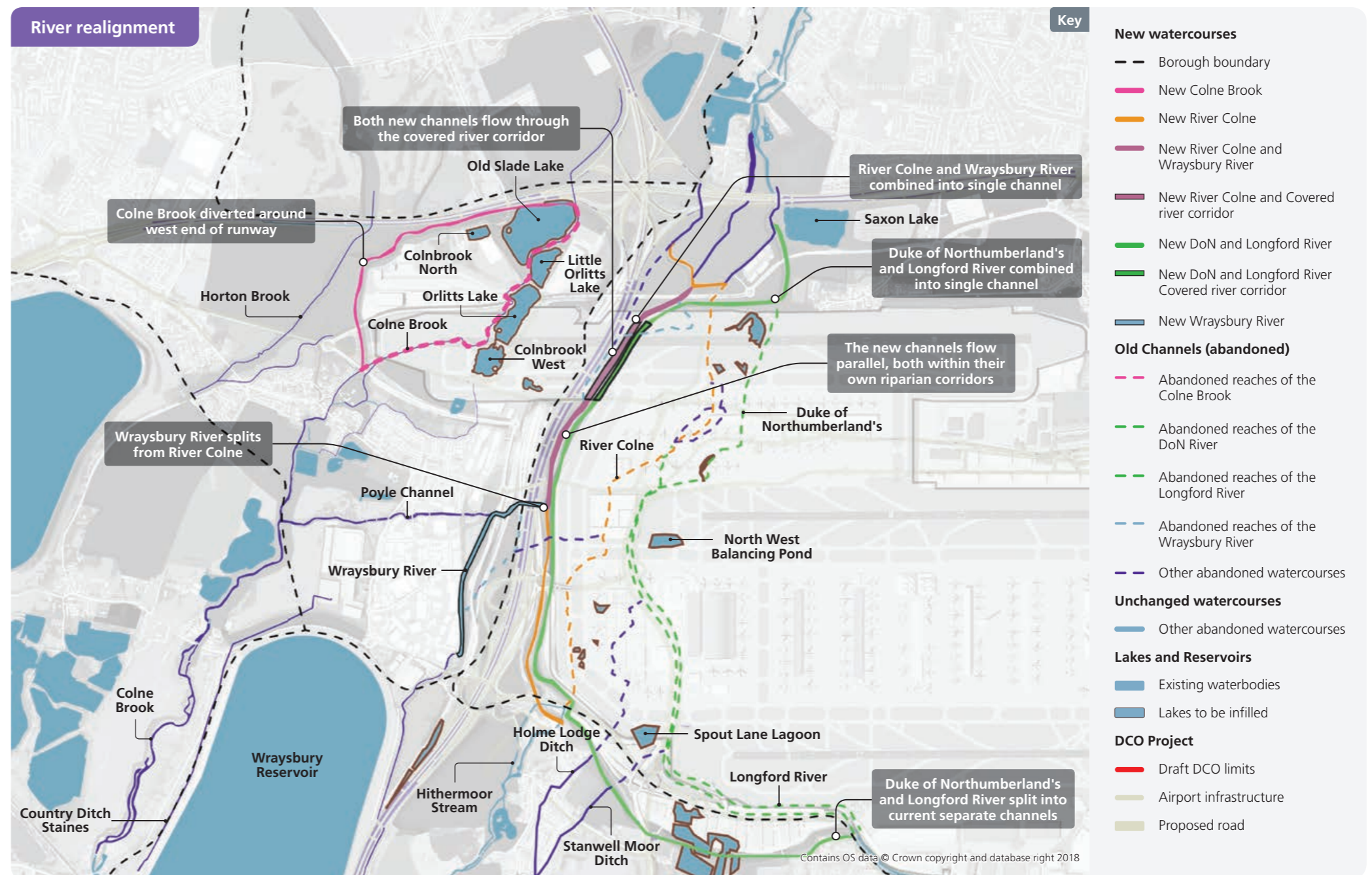
The new runway and expansion of the apron and taxiways to the west will require the diversion of a number of watercourses in the Colne Valley. This includes the River Colne, Wraysbury River, Longford River, the Duke of Northumberland's River and Colne Brook.

A number of smaller watercourses will also be diverted or removed to make room for the expanded airport.

In addition to changes to rivers, a number of lakes will be removed to facilitate expansion. The majority of these are along the course of the Colne Brook to the south of the M4. Spout Lane Lagoon (which is part of the current airport drainage system) will also be removed, to make way for the western apron expansion.

There will be changes to groundwater flow pathways in the underlying Lower Thames Gravels aquifer. This is due to the installation of new basements, as well as excavations and dewatering during construction.

The expanded airport will interact with the floodplain, which could affect how the local area responds to flood events. As a result, new areas of flood storage will be provided upstream of the site in the Colne Valley and new surface water drainage and treatment will be provided for the airfield, expanded road network and other development. Flood risk is being considered in great detail to ensure we protect local homes and businesses.



A summary of the effects reported in the PEIR

The majority of effects of the Project on the water environment are not considered significant, as a result of the measures that have been embedded in the design of the Project, and those that will be implemented during construction.

It is expected that there will be a significant negative effect as a result of the infilling of lakes, resulting in a loss of open water and associated habitat.

Significant negative effects are also predicted at this stage of the design of the proposals on the Wraysbury River, River Colne, Longford River and Duke of Northumberland's River as a result of passing the rivers beneath the new runway in the proposed covered river corridor.

There is also the potential for significant cumulative negative effects to the River Colne from the effects of the Project and HS2 which crosses the Colne Valley further north of Heathrow.

Measures for reducing potential effects

The main environmental measures to reduce effects on the water environment include:

- The design of the covered river corridor under the new runway, including the river channel design and the combination of natural and artificial lighting will be developed to encourage fish and animals to pass through it and plants to grow.
- Designing the new river channels to be of varying shape.
- Replacement river flood storage areas upstream of the airport.
- New on and off-airfield surface water drainage systems will be installed to ensure no effects on water quality and no change in flood risk as a result of runoff from new areas of hardstanding.
- A programme of river restoration opportunities along the Rivers Colne and Crane to provide compensation for the net loss of river length in the Colne Valley that will occur as a result of river channels being diverted and combined.
- Water management activities in the construction phase to capture and treat water from construction excavations and surface water runoff, before being released to the environment.



For further information on the water environment please see **section 3.5** of this document, the **Preferred Masterplan** document and **Chapter 4.6** of the **PEIR NTS**.



7.12. Carbon

It is our long term aspiration to make growth from our new runway carbon neutral. We have also made a commitment to operate zero carbon infrastructure, including buildings and other fixed assets by 2050.

International flights are by far the largest source of emissions. To address these, the international aviation industry has put in place a scheme known as CORSIA (Carbon Offsetting and Reduction Scheme for International Aviation). CORSIA has been set up by the United Nations to deliver “carbon neutral growth” from 2020 by offsetting the growth in emissions from international aviation.

Growth in CO₂ emissions from additional flights after expansion will be largely offset through CORSIA but we are exploring options to offset all the growth in emissions from flights.

The Airports NPS requires us to ‘report’ our carbon emissions to Government so that they can consider whether they would materially affect the ability of the UK to meet its overall reduction targets, including carbon budgets.

‘Carbon’ is used in this document to refer to carbon dioxide and other Greenhouse Gas emissions. Carbon from flights makes up over 96% of the carbon and greenhouse gas emissions from Heathrow, with surface access contributing 3%.

Aspects of our proposals that could cause effects

Construction, air transport, surface transport, airport buildings, and ground operations within and beyond Heathrow’s boundary all create carbon emissions.

A summary of the effects reported in the PEIR

Carbon emissions will occur in all phases of development, over a long period of time.

Although international air transport is by far the largest contributor of emissions from the Project, emissions will also arise from surface access transport, airport buildings, and ground operations.

There is currently no agreed threshold at which the volume of carbon emissions is considered to be ‘significant’ in EIA terms, but they contribute to climate change, regardless of where or when the emissions occur. We have therefore reported in our preliminary assessment that the Project will have a significant negative effect, as carbon emissions contribute to global climate change.

Our assessment has also considered carbon emissions in relation to UK policy and legislation on climate change. The carbon emissions from an expanded Heathrow are calculated to be equivalent to 1.2% of the UK 2050 carbon target set by the Climate Change Act 2008. This comparison excludes Greenhouse Gas emissions from international aviation, which are not included in current UK carbon budgets or explicitly in the UK’s 2050 target. Heathrow’s contribution to total emissions from international flights departing the UK in 2050 remains comparable to today.

Expansion at Heathrow is not considered to materially affect the ability of the Government to meet UK carbon reduction targets.

Measures for reducing potential effects

There are many opportunities for the Project to reduce carbon emissions, these include:

- **Construction design:**
 - Use of rail access, to allow more materials and waste to be transported by rail rather than road.
 - A reduction of the volume of construction materials and the use of materials with lower embodied carbon.
- **Air Transport:**
 - The airfield will be designed for efficient operations, including reduced taxiing distances for aircraft.
 - New technology will be installed at aircraft stands to reduce the need for aircraft to use their own power. Fuelling infrastructure will be capable of distributing sustainable aviation fuels.
 - We are looking at ways to speed up the uptake of more carbon-efficient aircraft through aircraft operator charges.
 - Much of the growth in air transport emissions from the Project will be offset by airlines (through international agreements). We are engaging with airlines and governments to encourage sustainable operations.

• Surface Access:

- New employment is located close to public transport hubs, such as the Central Terminal Area and Hatton Cross rail station which makes it easier for people to use public transport.
- The road design will meet future traffic requirements, reducing the risk of congestion; something that leads to increased carbon emissions.
- Vehicle charging points are included in the design to encourage the use of low emission electric and hybrid vehicles.

• Airport buildings and ground operations:

- The design includes energy efficiency features, low carbon energy generation and a range of measures to improve the management of waste, materials and water.

Our assessment of carbon emissions will continue to be updated to take account of the latest airport footprint, any design or operational changes and UK Government policy on carbon emissions.



For further information on carbon please see **Chapter 4.7** of the **PEIR NTS** and the **Preferred Masterplan, Environmentally Managed Growth** and **Surface Access Proposals** documents.

7.13. Climate change

The effects of climate change present challenges to the Project and the airport in the future.

The climate change assessment focusses on how expansion could be affected by climate change so we can ensure that the design will be able to cope with projected future climate change effects.

An example of this is the need to consider how aircraft using the airport will be able to perform in higher temperatures; hot weather generally means aircraft need more of the runway to take off. This is something that we have looked closely at in our masterplan development process.

Aspects of our proposals that could cause effects

Climate change has the potential to have a direct effect on the airport (for example, very high rainfall filling drainage structures) to exacerbate environmental effects identified in other sections of this document and to affect the measures put in place to reduce effects on the environment (for example, migration of species from newly created habitats).

Based on climate change projections for the UK provided by the Met Office, we have reviewed which parts of the airport might be affected by a changed climate and the measures needed to ensure that the airport retains its resilience to these projected changes.

A summary of the effects reported in the PEIR

The assessment has considered a range of different climate changes; higher average temperatures and more heatwave events, reduced summer rainfall, more frequent intense rainfall events; potentially increased extreme wind and storm events; and fewer extreme cold events.

If the airport design did not consider climate change there would be a greater chance of effects such as rainfall filling drainage, increased flooding, overheating in buildings and public spaces, failure of equipment in extreme temperatures, water shortages, operational disruption from storm events, and alterations to affected or new landscapes.

There are no significant effects following the assessment of climate change impacts on the construction and operational phases of the Project. This is because all relevant and implementable environmental measures have been embedded into the Project design.



For further information on climate change please see **Chapter 4.8** of the **PEIR NTS**.

Measures for reducing potential effects

A range of environmental measures have been included in the design of the Project to reduce the negative effects of climate change on the airport. This includes allowances for climate change in the design of buildings, infrastructure and the natural landscape to ensure expansion is resilient to projected changes in climate.

Climate change is also considered in the design of flooding, drainage and pollution control systems by allowing for increased winter river flow and rainfall. Our contractors will also be required to plan for extreme weather events in the context of climate change.

A Climate Change Adaption Plan (CCAP) will be prepared alongside the Environmental Statement. The CCAP will set out how climate change is considered throughout the design, construction and operations across the whole of Heathrow. Additionally, it will document monitoring and evaluation processes for continual improvement throughout the operation of an expanded Heathrow.

Existing good practice environmental measures will also continue to be adopted. These include our Climate Change Adaptation Reporting, an operational resilience framework, fire risk assessment, lightning protection units and a series of energy and water efficiency measures.



7.14. Waste

We want to ensure that the expansion of Heathrow is sustainable. This means enhancing the airport's social and economic benefits and reducing our negative environmental effects, including our generation and management of waste.

Aspects of our proposals that could cause effects

Construction works will generate wastes from excavations, demolition and construction activities.

The increased number of passengers and flights that will use an expanded Heathrow will also result in more operational waste being generated (for example from litter bins, in-flight catering, retailers within the terminals, and new hotels). We have a duty to manage this waste responsibly and sustainably.

A summary of the effects reported in the PEIR

The waste arising from the construction and operation of the Project will require on-site management to increase re-use and recycling rates, and reduce the amount requiring disposal. There will be some waste which needs to be managed in existing off-site waste facilities, for example for further sorting of recyclables, composting, energy recovery, or landfill as the last resort.

The waste assessment focusses on the capacity of the surrounding waste facilities to manage (or otherwise) the waste arising from the Project. Significant effects may be caused if the waste results in a large reduction in landfill void space or a severe capacity gap in treatment infrastructure available in the local or regional area.

Even without the Project, the waste arising in the study area is already greater than the available waste treatment and disposal capacity. Without mitigation, the gap will increase over time as there is typically limited spare capacity within current waste facilities to manage the effects of future housing and population growth. The Project will lead to an acceleration in loss of this waste treatment and disposal capacity. As such, the preliminary assessment concludes that the Project is considered to have a significant negative effect on waste treatment and disposal capacity.

Measures for reducing potential effects

Embedded and good practice environmental measures on the management of waste have been included in the design of the Project in order to minimise likely significant effects including, for example, actions to promote the prevention, re-use and recycling of waste, with new on-site facilities to inspect, store and segregate waste.

We will incorporate various measures to promote sustainable construction. These include:

- off-site assembly;
- the use of standardised products and components, promoting the use of recycled or secondary materials, avoiding unnecessary packaging;
- re-using excavation arisings on-site to minimise the need for landfill.

Any hazardous waste arisings from the excavation of historic landfill sites will be transported to licensed treatment and disposal facilities and we will endeavour to favour rail over road where reasonably practicable.



For further information on waste please see **Chapter 4.10** of the **PEIR NTS** and for details on how we plan to manage waste please see the **Draft Code of Construction Practice**.

Your views on how we manage the effects of expansion



We want to know what you think about our proposals to manage the environmental effects of expansion and, in particular:

- whether there are any other initiatives or proposals that we should consider to address the emissions from airport related traffic or airport operations
- our proposals to help health and well-being, in particular whether there are any proposals that you think we should consider to address the effect of the Project on the health and wellbeing of our colleagues, neighbours and passengers
- our noise insulation schemes
- what factors are most important as we develop our proposals for noise management, in particular our proposals for the design and implementation of a noise envelope
- our proposals for maximising new jobs and training, in particular, whether there are any other ways that we can maximise skills and training opportunities to benefit our local communities
- on our approach to addressing effects on the historic environment, including any particular proposals you would like us to consider

Please see **section 14** of this document for specific questions.



8. Growing within environmental limits

Expansion at Heathrow is not a choice between the economy and the environment – it must deliver for both.

As the airport is expanded and redeveloped, there will be an increase in aircraft movements and passenger numbers and, as our operations grow, this will result in some related effects.

The main effects of the growth in our operations relate to:

- Surface access (traffic);
- Air quality;
- Aircraft noise; and
- Carbon emissions.

We propose to manage our growth through the use of an environmental framework.

This approach, known as Environmentally Managed Growth, will require us to monitor, review and report on the effects of our growth and, in relation to surface access (traffic), air quality and aircraft noise, identify and commit to defined limits (also described as envelopes).

These limits will set out the maximum level of effect that we will be allowed to have as the airport grows.

These clear limits will align with policies in the Airports NPS and would make sure that the tests which the Airports NPS and our DCO consent set out are adhered to into the long term. Whilst some people have doubted that these limits can be observed as the airport grows, we propose to commit to them.

If acceptable to the Secretary of State for Transport, the framework and limits will be part of our approval to grow, and we will be legally bound to remain within the published limits.

The consultation document **Environmentally Managed Growth** explains our proposals in more detail. It includes a draft of the limits that might be adopted.

The essence of the environmental limits is explained below.

Surface access

The Airports NPS has two main requirements for surface access which are set out as targets. Heathrow must:

- increase the proportion of journeys made to the airport by public transport, cycling and walking to achieve a public transport mode share of at least 50% by 2030, and at least 55% by 2040 for passengers; and
- from a 2013 baseline level, achieve a 25% reduction of all colleague car trips by 2030 and a reduction of 50% by 2040.

As well as these requirements we are developing our plans to address the other Airports NPS requirements to provide mitigation measures to “minimise and mitigate” the effects of expansion on existing surface access and to take “all reasonable steps” to mitigate surface access effects during construction and operation.

Air quality

The Airports NPS makes clear that the Secretary of State will need to be satisfied that, with mitigation, the expansion of the airport will comply with legal obligations for air quality which have been set to protect human health and the environment.

Air quality standards in the UK come from the EU’s Ambient Air Quality Directive which sets limits for the main pollutants such as nitrogen dioxide, carbon monoxide and particulates. The UK must not exceed limits of these pollutants.

The limits we propose will ensure that we only increase the capacity of the airport if it does not:

- cause a compliant zone to be non-compliant with air quality limit values; or
- delay the date that a currently underperforming area will achieve compliance with the Air Quality Directive.

These limits will be embedded in our framework for Environmentally Managed Growth.

As well as these limits we will seek to minimise air quality levels below the limit values; this will be done in balance with the wider benefits of growing the airport.

Aircraft noise

The Airports NPS has three main requirements on noise for an expanded Heathrow:

- Any noise management measures “should ensure the impact of aircraft noise is limited and, where possible, reduced compared to the 2013 baseline assessed by the Airports Commission”.
- Permission for expansion should not be given unless the proposals:
 - avoid significant adverse impacts on health and quality of life from noise;
 - mitigate and minimise adverse impacts on health and quality of life from noise; and
 - where possible, contribute to improvements to health and quality of life.
- There must be a progressive improvement in Heathrow’s noise performance.

Our framework proposes that a noise envelope defines limits for these requirements and suggests that may be by reference to contour areas or by using a quota count system. The noise envelope will control total noise emissions from the airport due to aircraft noise and will sit within the framework. **Section 7.4** of this document explains the noise envelope in more detail and **section 5** of this document explains quota counts. This noise envelope and these limits will be part of our framework for Environmentally Managed Growth.

We also propose that the noise envelope including these limits should be regularly revised to become progressively tighter. In this way airlines and the airport will be incentivised to develop quieter aircraft and to share the benefit of that with affected communities. To continue to grow our operations, we will need to continually improve our noise performance.

Carbon

The Airports NPS contains a requirement that carbon emissions from the expansion of Heathrow must not have a material effect on the ability of Government to meet its carbon reduction targets, including carbon budgets.

Carbon emissions need to be considered in the context of the global nature of their effects and the action being taken at an international level by the aviation industry and nationally by the UK Government in their carbon policy. For this reason, the Environmentally Managed Growth framework is proposing that Heathrow will commit to:

- the implementation of specific mitigation measures to ensure expansion does not have a material effect on the ability of Government to meet its carbon reduction targets;
- a mechanism for an ongoing review and reporting of carbon emissions involving independent oversight; and
- taking appropriate additional action in the event that the above objective is threatened.

Monitoring the limits

To implement Environmentally Managed Growth, we will upgrade our current environmental monitoring regime for traffic, air quality, aircraft noise and carbon emissions to accurately report performance against the limits.

Data will be published regularly online and a detailed Annual Monitoring Report will be published showing how the airport is performing in relation to the limits.

Independent scrutiny

We propose that an Independent Scrutiny Panel (the Scrutiny Panel) will be set up to oversee and facilitate the future growth of the airport. We are seeking views on how the Scrutiny Panel will be made up as part of this consultation. It could feature specialist representatives from organisations such as the Heathrow Area Transport Forum, the Heathrow Strategic Planning Group, the Independent Commission on Civil Aviation Noise, and other groups.

The Scrutiny Panel, with the right technical capability and resourcing, will review the Annual Monitoring Report and make sure the various commitments and limits are upheld.

The Scrutiny Panel will be given full powers to enforce the limits against Heathrow and to hold us to account for environmental performance by requiring corrective action to be taken or mitigation to be put in place.

The graphic below shows how monitoring the limits could work for Heathrow's expansion.

Our **Environmentally Managed Growth** document sets out further details, including describing how similar approaches have been taken at other international airports in Europe, how the proposed limits are developed and the way in which monitoring and the work of the Scrutiny Panel will be carried out.

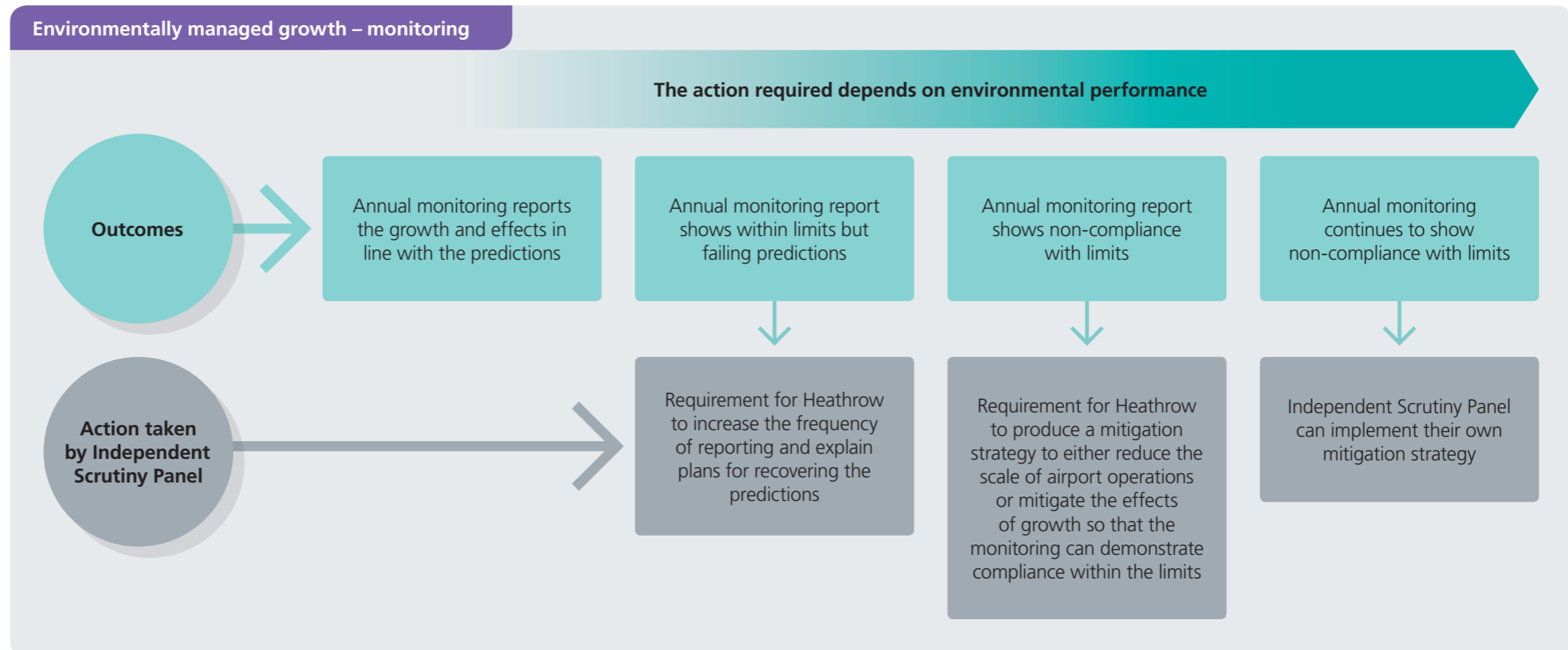
With the framework in place, environmental performance will become central to the day to day operation and growth of the airport. Heathrow's objective will be closely aligned with the objectives of affected communities – we will have to earn the right to grow.

Your views



Please tell us what you think of our proposed approach to manage the future growth of the airport within environmental limits. Is there anything else we should consider as we develop the framework and its potential limits?

Please see **section 14** of this document for specific questions.



9. Community fund

As part of our expansion plans, we are proposing a new Community Fund (“the Fund”) to help address the positive and negative effects of the Project and improve the quality of life in the area around the airport.

The Airports NPS requires us to consult on five areas of the Fund: eligibility, size, duration, delivery, and source of funding. We have generated ideas on all of these areas, and we want to hear your feedback so that you can help shape how the Fund works for your community in the coming years.

The **Proposals for Mitigation and Compensation** document provides detailed information on our ideas. We summarise our initial proposed approach to the Fund below.

Eligibility to the Fund

We have developed some draft guiding principles for the types of things the Fund could cover. These have been informed by research the Department for Transport undertook with local communities over the last year, that asked what things they thought the Fund should be spent on.

In principle, we think the Fund could be used for:

- Enhancements to quality of life, which could include spending relating to community activities, health, transport, or the environment (e.g. spending on community clubs, subsidised public transport and investment in local green spaces);
- Initiatives which help enhance the benefits of expansion for local communities, such as support for the Heathrow Academy, skills and jobs initiatives, and apprenticeship schemes;
- Enhancements of re-provided facilities or services which are linked to the Project and which deliver a wider community benefit (e.g. additional play areas and school places); and
- Additional or ongoing mitigation measures, particularly where it is not possible to identify or quantify the measures necessary at the time of submitting the DCO application or when the DCO is granted consent.

The draft guiding principles would apply during both construction and operation of the airport providing clarity on what the fund can and cannot be spent on.

In order for the Fund to be proportionate to environmental impacts, we consider it would be helpful to focus eligibility on areas which are close to construction sites, close to the airport itself, including key roads and public transport routes, and areas within a particular noise contour (a line on a map that represents equal levels of noise exposure).

Size of the Fund

The Airports NPS states that the size of the Fund should be proportionate to the environmental harm caused by the Project. Until we have completed our full assessment of effects, we cannot know the likely variety of measures needed and necessary size of the Fund. We do think, however, that it may be appropriate for the size to vary over time, as the Project moves through its different phases.

Duration of the Fund

Depending on what the Fund is used for, it is possible that it could start funding measures during the construction period or when the new runway opens. Some parts of the Fund could end when the relevant impacts end, or when the necessary outcomes have been achieved. Other elements of the Fund could be on-going, managed by a review process which takes account of how the Fund is performing.

Source of Funding

We are considering a range of potential funding sources for the Fund, including:

- Heathrow funding of transport, environmental, community and health measures for an expanded airport that meet our draft guiding principles;
- A passenger levy, similar to the noise levy concept recommended by the Airports Commission, ensuring that travellers who benefit from an expanded airport contribute directly to measures that address and compensate for the negative effects;
- Further funding, raised through an airport charge paid by the airlines, that could also be used for mitigation and compensation measures which enhance quality of life or have a clear community benefit.

The Fund is likely to be made up from one or more of these funding sources and will require Civil Aviation Authority approval.

It is also possible that a ‘match funding’ approach could be used where appropriate to support measures and initiatives where there is already scope for funding from other sources. This would help to top-up the funding available, helping to bring beneficial projects forward and potentially quicker than would otherwise be the case.

Delivery of the Fund

We need to make sure the Fund is spent in the right ways and is effective, but it also needs to be simple for local communities to access in a timely way and without long and complicated processes.

Potential approaches to governance and oversight include designing an over-arching spending strategy which runs over a period of time; individual spending strategies for different elements of the Fund; or crowd-sourcing of ideas. We want to and would need to retain a key role in how some elements of the Fund are operated, including a role in monitoring any residual effects of the Project. A range of other bodies could also be involved, including the Heathrow Community Engagement Board, Heathrow Strategic Planning Group, Heathrow Strategic Noise Advisory Group and others.

We anticipate different elements of the Fund will require different approaches to delivery, with different partners involved. These approaches could include collaboratively partnering with Local Authorities and Local Economic Partnerships to deliver local skills and apprenticeships, and/or extend opportunities through match funding and/or working with local public service providers such as the NHS or local schools to deliver health and education related mitigation.

Your views

We want to know what you think about our proposals for the Fund, including what it is spent on, where it is spent, and how it should be funded and delivered.

Please see **section 14** of this document for specific questions.



10. Property and compensation

We recognise that people who live in or own property near Heathrow could be affected by expansion.

To construct and operate an expanded Heathrow there will be some areas of land, including residential, commercial and agricultural properties, that we will need to acquire.

We also recognise that property and land owners living near to the new boundary of the expanded airport could be affected by expansion even though we do not need to acquire their properties.

We understand that this may cause concern, so we have developed discretionary property compensation schemes for owners or occupiers of land which may need to be acquired, or may be affected by expansion.

These are set out in our Interim Property Policies. These policies have been developed and updated following feedback from Airport Expansion Consultation One in January 2018.

We would like your feedback on our Interim Property Policies and we want to ensure affected property and landowners are well informed and understand the range of enhanced compensation packages which we propose to provide.



You can find more information in our **Property Policies Information Paper** and our **Proposals for Mitigation and Compensation**.

The policies

1

Our interim Residential Property Policy covers properties within the Compulsory Purchase Zone (CPZ) and a Wider Property Offer Zone (WPOZ).

2

Our interim Policy for Agricultural Land and Property sets out our approach for owners of agricultural land together with associated farmhouses and other farm buildings.

3

Our interim Commercial Property Policy sets out the approach for larger commercial interests as well as our offer for those with small business interests.

4

Our interim Property Hardship Scheme operates in relation to residential, agricultural and small business properties, where owners have a compelling need to sell their properties before they would be able to under one of our Interim Property Policies, but have been unable to do so on the open market.

5

Our interim Professional Fees Policy sets out the approach to professional fees incurred in association with the compulsory acquisition process. Please refer to that policy document for further detail and bear in mind that all costs that you may expect Heathrow to reimburse must be agreed with us before you spend them.

Where do our property policies apply?

Our property policies apply within certain areas. These are explained below and outlined on the map.

Compulsory Purchase Zone

The expansion of Heathrow will need a large area of land which will need to be acquired by Heathrow and currently includes residential, commercial and agricultural properties and land.

Since Airport Expansion Consultation One in 2018 we have been carrying out detailed design to ensure that the Compulsory Purchase Zone reflects our current understanding of the boundary of the future, expanded airport. This area is referred to as the Compulsory Purchase Zone.

Within this zone, you may be eligible for compensation. Further information can be found within;

- The interim Residential Property Policy
- The interim Agricultural Land and Property Policy
- The interim Commercial Property Policy
- The interim Professional Fees Policy
- The interim Property Hardship Scheme Policy

Draft Development Consent Order Limits

Beyond the Compulsory Purchase Zone there are also other areas of land which may be needed to support the airport's infrastructure, to help manage the environmental effects of the Project and to facilitate its development.

This land sits within the "draft Development Consent Order Limits", which is the boundary of land which we will apply for as part of our DCO application and will look to take either temporarily or permanently or will use to carry out works on the Project. We do not expect that residential properties that lie beyond the current boundary of the Compulsory Purchase Zone referred to above will be required for the Project.

The draft Development Consent Order Limits shown on the map are the maximum extent of what we currently think might be needed.

Within this zone you may be eligible for compensation. Further information can be found within;

- The interim Agricultural Land and Property Policy
- The interim Commercial Property Policy
- The interim Professional Fees Policy
- The interim Property Hardship Scheme Policy

The full extent of the land we will need has not yet been fixed and will depend on the final design of the Project, which itself is still subject to consultation, but which will be submitted as part of our DCO application.

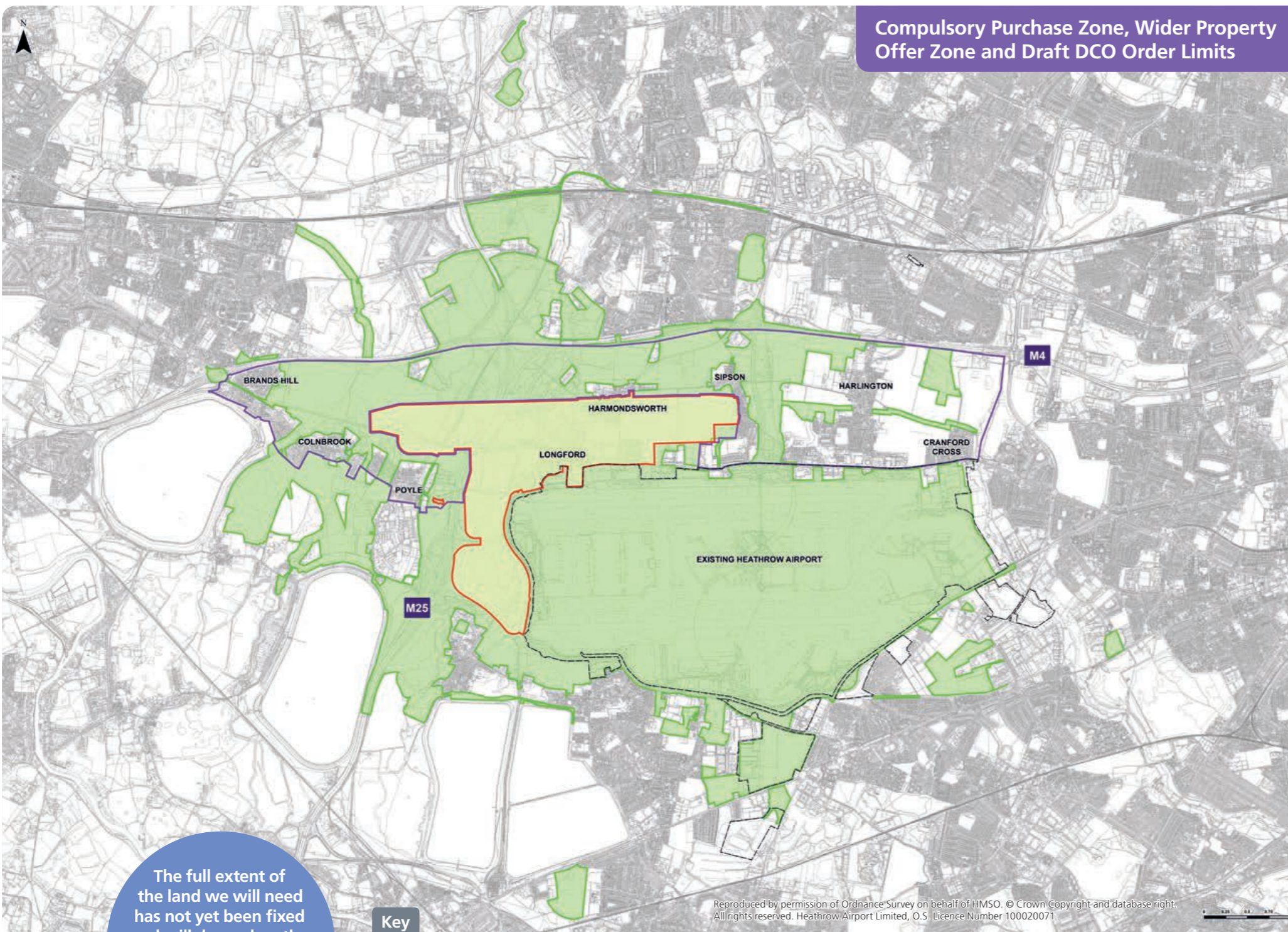
Wider Property Offer Zone

We also recognise that people who own and occupy properties outside the Compulsory Purchase Zone but within close proximity to the proposed new boundary of the airport could be affected by our activities even though they are not required for the Project. This wider area is known as the Wider Property Offer Zone.

Within this zone, you may be eligible for compensation. Further information can be found within;

- The interim Residential Property Policy
- The interim Commercial Property Policy
- The interim Professional Fees Policy
- The interim Property Hardship Scheme Policy





The full extent of the land we will need has not yet been fixed and will depend on the final design of the Project, which will be submitted as part of our DCO application.

<p>Key</p> <p> Wider Property Offer Zone (WPOZ)</p>	<p> Compulsory Purchase Zone (CPZ) – which includes all residential properties currently anticipated to be required by the Project.</p>	<p> Draft Development Consent Order Limits – extent of land beyond the CPZ where we may need to exercise DCO powers for the construction or operation of the Project. (No residential properties beyond the CPZ anticipated to be required for acquisition for the Project.)</p>
---	---	--

When will the property policies come into effect?

We already run the interim Property Hardship Scheme, and this will remain in operation until we obtain consent to expand Heathrow and construction has begun.

All interim policies will be updated following this consultation and developed further once we have considered feedback on them. They will then be published as final policies.

i For more detail on each of the policies, your eligibility and how you could apply, please read the **Property Policies Information Paper** and our **Proposals for Mitigation and Compensation**.

Your views ?

We want to know what you think about our interim Property Policies, including our general approach to buying properties and land and our approach to compensation, including our discretionary compensation offers.

Please see **section 14** of this document for specific questions.



11. Airspace

The changes to our flight paths follow a separate approvals process to the physical expansion of the airport on the ground.

To obtain permission for new flight paths associated with expansion, we need to submit an Airspace Change Proposal to the Civil Aviation Authority (CAA). But we can only do that once we have DCO consent. Both the airspace change and the DCO processes will be overseen by the Secretary of State for Transport.

We will not know what the final airspace design will be until after our flight path options consultation (in 2022), but we have considered the likely effects of flight paths as part of our assessment of environmental effects, presented in this consultation.

To do this we developed a range of indicative 'test case' airspace designs which show the range of potential effects. The test cases were based on the information we have at this early stage in the CAA airspace design process and are indicators of potential effects rather than being actual options for the airspace design. Actual options for flight paths can only come through the airspace change process which will involve detailed analysis of all the airspace design principles, including safety and technical considerations as well as environmental effects.

The test cases do not represent the final airspace design but provide a good basis to inform our environmental assessment for this stage of the DCO.

We have already undertaken two consultations on future flight paths for an expanded Heathrow: a consultation on our 'design principles' in early 2018 and a consultation on 'design envelopes' (geographical areas where future flight paths could be positioned) in early 2019.

Following the first airspace consultation, we submitted our design principles to the CAA in September 2018. Our design principles are available at www.heathrowexpansion.com/documents-resources/heathrow-airspace-design-principles-submission/

We are currently reviewing the responses to our consultation on design envelopes earlier this year. We had approximately 20,000 suggestions of 'local factors' within the design envelopes. These are locations that respondents would like us to take into account when designing flight paths for an expanded Heathrow. These 'local factors' will be entered into a database alongside known locations, buildings and sites which are known to be sensitive to noise and we will consider these during the airspace design process.

We will undertake a full public consultation of the flight path changes for expansion in 2022.

This consultation will follow ongoing airspace design work and stakeholder engagement and will provide an opportunity for you to have your say on our proposals for flight paths that aircraft will take when arriving at and departing from the airport.

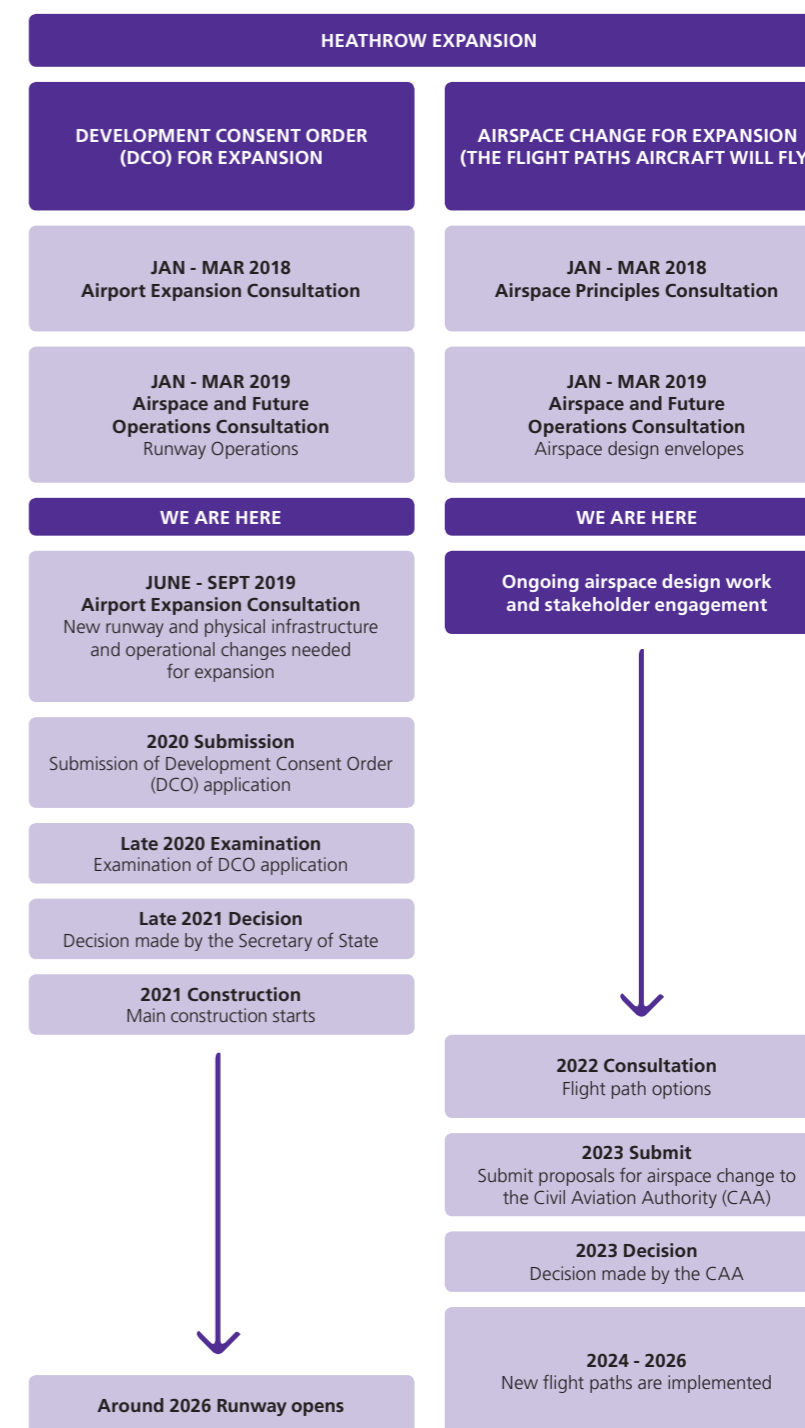
Airspace changes for our two runway operation

We are also undertaking a number of changes to help our current two runway airport operate more efficiently. These changes include the introduction of Independent Parallel Approaches (IPA) and a redesigned Compton departure route on easterly operations.

We will also be looking to introduce slightly steeper approaches for arriving aircraft and changes required to enable us to alternate our runways when we are on easterly operations (which we were previously unable to do due to the legacy of the Cranford Agreement). More information on these airspace changes is available on our website at www.heathrow.com/noise/future-airspace



For more information on the relationship between our DCO application and the Airspace Change Process, see our **Future Runway Operations** document.









12. Have your say

You can find more information about this consultation on our website, at consultation events and at our document inspection locations.

Providing feedback

Your feedback is important to us and will help us determine our final proposals for expansion. Feedback that we have received during our previous consultations and through our ongoing engagement has been carefully considered in developing our proposals and we want to know what you think about them.





You can provide us with your comments in several ways:

-  **Online** using the feedback form at our website aec.heathrowconsultation.com
-  Email us at: feedback@heathrowconsultation.com
-  **Complete a feedback form**, available at events or on request using the contact details provided in this leaflet
-  Write to us at:
Freepost LHR AIRPORT EXPANSION CONSULTATION

We cannot respond individually to any questions sent via the website, freepost address or consultation email address set out above. Feedback will be set out in a Consultation Report that we will publish as part of our DCO application.

This consultation will run for twelve weeks from **18 June** until **11:55pm** on **13 September 2019**. Feedback received after the deadline may not be taken into consideration.

Finding out more

-  All the consultation information is on our website aec.heathrowconsultation.com
- You will also be able to access other useful tools such as animations and fly-through videos showing our proposals.
-  Follow **@LHRconsultation** to stay up to date on event details
-  Email any questions about the consultation to info@heathrowconsultation.com
-  Call our freephone number **0800 307 7996** (open Monday to Friday, 9am – 6pm)

Document inspection locations

You can also visit any of our document inspection locations to view information on the consultation.

These inspection locations are not staffed so if you do have a query you will need to contact us so that we can help you.

Documents at these locations are for reference only, if you need hard copies of the documents to take away, please contact us on **0800 307 7996** or email info@heathrowconsultation.com

Consultation events

Come along to any event to speak to a member of the Heathrow team and find out more about the consultation. You can also pick up copies of the consultation documents, watch our videos and animations, and view a model of the expanded airport.

We will hold sound demonstrations at venues which have the headphones icon next to them. These provide demonstrations to help you understand what aircraft may look and sound like at different heights, both outside and indoors.

Consultation events

WANDSWORTH Tuesday 2 July, 2-8pm

Wandsworth Civic Suite, Wandsworth High Street, London SW18 2PU

HARMONDSWORTH Wednesday 3 July, 2-8pm

St Mary's Church, High Street, Harmondsworth, West Drayton UB7 0AQ

CHELSEA Friday 5 July, 2-8pm

Chelsea Old Town Hall, King's Road, Chelsea, London SW3 5EE

MAIDENHEAD Saturday 6 July, 10am-4pm

Nicholsons Shopping Centre, Nicholsons Lane, Maidenhead SL6 1LB

STANWELL MOOR Sunday 7 July, 10am-4pm

Stanwell Moor Village Hall, 123 Horton Road, Stanwell Moor, Staines TW19 6AQ

LONGFORD Tuesday 9 July, 2-8pm

Thistle London Heathrow Terminal 5, Bath Road, Longford UB7 0EQ

EALING Wednesday 10 July, 2-8pm

DoubleTree by Hilton London – Ealing, 2-8 Hanger Lane, Ealing Common, London W5 3HN

WOKING Thursday 11 July, 2-8pm

H.G. Wells Conference Centre, Church Street East, Woking GU21 6HJ

RICKMANSWORTH Friday 12 July, 2-8pm

Watersmeet, High Street, Rickmansworth WD3 1EH

YIEWSLEY & WEST DRAYTON Saturday 13 July, 10am-4pm

Yiewsley & West Drayton Community Centre, 228 Harmondsworth Road, West Drayton UB7 9JL

GERRARDS CROSS Tuesday 16 July, 2-8pm

Colston Hall, 8 East Common, Gerrards Cross SL9 7AD

NORTHOLT Wednesday 17 July, 2-8pm

Northolt Leisure Centre, Eastcote Lane North, Northolt UB5 4AB

LAMBETH Thursday 18 July, 2-8pm

Wheatsheaf Community Hall, Wheatsheaf Lane, off South Lambeth Road, London SW8 2UP

CENTRAL LONDON Friday 19 July, 2-8pm

20 Cavendish Square, London W1G 0RN

LEATHERHEAD Saturday 20 July, 10am-4pm

Leatherhead Methodist Church, Church Road, Leatherhead KT22 8AY

EAST MOLESEY Tuesday 23 July, 2-8pm

Imber Court Sports Club, Ember Lane, East Molesey KT8 0BT

HAMMERSMITH Wednesday 24 July, 2-8pm

Hammersmith Town Hall, King Street, Hammersmith W6 9JU

HARROW Thursday 25 July, 2-8pm

Harrow Leisure Centre, Christchurch Avenue, Harrow HA3 5BD

FELTHAM Saturday 27 July, 10am-4pm

Feltham Assembly Hall, Feltham Park, Hounslow Road, Feltham TW14 9DN

BRACKNELL Tuesday 30 July, 2-8pm

Grange Bracknell Hotel, The Ring, Bracknell RG12 1ED

SIPSON Wednesday 31 July, 2-8pm

London Heathrow Marriott, Bath Road, Harlington, Hayes, Middlesex UB3 5AN

BEACONSFIELD Thursday 1 August, 2-8pm

The Fitzwilliams Centre, Windsor End, Beaconsfield HP9 2JW

HOUNSLOW Friday 2 August, 2-8pm

Hounslow House, 7 Bath Road Hounslow Middlesex TW3 3EB

STANWELL Saturday 3 August, 10am-4pm

Stanwell Village Hall, 13 High Street, Stanwell Village TW19 7JR

BRENTFORD Wednesday 7 August, 2-8pm

Holiday Inn Brentford Lock, Commerce Road, Brentford TW8 8GA

HARLINGTON Thursday 8 August, 2-8pm

St Peter and St Paul's Church Harlington, High Street, Harlington, Hayes UB3 5DN

EWELL Friday 9 August, 2-8pm

Bourne Hall, Spring Street, Ewell KT17 1UF

COLNBROOK Saturday 10 August, 10am-4pm

Colnbrook Village Hall, Vicarage Way, Colnbrook SL3 0RF

CAMBERLEY Tuesday 13 August, 2-8pm

The Square, Camberley, Surrey GU15 3SL

BRENT Wednesday 14 August, 2-8pm

The Drum at Wembley, Brent Civic Centre, 32 Engineers Way, Wembley HA9 0FJ

WALTON-ON-THAMES Thursday 15 August, 2-8pm

Xcel Sports Hub, Waterside Drive, Walton-on-Thames KT12 2JG

STAINES Friday 16 August, 2-8pm

The Hythe Centre, Thorpe Road, Staines TW18 3HD

WIMBLEDON Saturday 17 August, 10am-4pm

Everyday Church, 30 Queens Road, Wimbledon SW19 8LR

UXBRIDGE Tuesday 20 August, 2-8pm

Brunel University London, Conference Services, Uxbridge Campus, Kingston Lane, Uxbridge UB8 3PH

ASCOT Wednesday 21 August, 2-8pm

Ascot Racecourse, High Street, Ascot SL5 7JX

RICHINGS PARK Thursday 22 August, 2-8pm

Absolutely Fitness - Richings Sports Park, 34A Wellesley Avenue, Richings Park, Iver SL0 9BN

CHISWICK Friday 23 August, 2-8pm

Chiswick Town Hall, Heathfield Terrace, Turnham Green, London W4 4JN

WINDSOR Saturday 24 August, 10am-4pm

Windsor Youth and Community Centre, Alma Road, Windsor SL4 3HD

KINGSTON UPON THAMES Tuesday 27 August, 2-8pm

Kingston University, Penrhyn Road Campus, Penrhyn Road, Kingston upon Thames KT1 2EE

RICHMOND Wednesday 28 August, 2-8pm

Richmond Adult Community College, Parkshot, Richmond Upon Thames, London TW9 2RE

SLOUGH Thursday 29 August, 2-8pm

The Curve Slough, William Street, Slough SL1 1XY

TWICKENHAM Friday 30 August, 2-8pm

York House, Richmond Road, Twickenham TW1 3AA

SOUTHALL Saturday 31 August, 10am-4pm

The Dominion Centre, 112 The Green, Southall, Middlesex UB2 4BQ

Come along to any event to speak to a member of the Heathrow team and find out more about the consultation. You can also pick up copies of the consultation documents, watch our videos and animations, view our model of the expanded airport and listen to sound demonstrations.

We will hold sound demonstrations at all venues which have the headphones icon next to them.



Document inspection locations

Documents at these locations are for reference only, if you need hard copies of the documents to take away, please contact us using the details in this leaflet.

You can also visit any of our document inspection locations to view information on the consultation.

These inspection locations are not staffed so if you do have a query you will need to contact us so that we can help you.

For further details on our document inspection locations please see our website aec.heathrowconsultation.com

Banstead Library

The Horseshoe, Bolters Lane,
Banstead SM7 2AW

Barbican Library

Silk Street, London EC2Y 8DS

Bracknell Central Library

2 Town Square, Bracknell RG12 1BH

Brent Civic Centre

32 Engineers Way, Wembley HA9 0FJ

Brixton Library

Brixton Oval, London SW2 1JQ

Charing Cross Library

4-6 Charing Cross Road,
London WC2H 0HF

Croydon Central Library

Clocktower, Katharine Street, Croydon CR9 1ET

Ealing Council Offices

Perceval House, 14-16 Uxbridge Road, Ealing,
London W5 2HL

Elmbridge Borough Council Civic Centre

High Street, Esher, Surrey KT10 9SD

Epsom Library

6 Epsom Square, Epsom, Surrey KT19 8AG

Gayton Library

5 St Johns Road, Garden House, Harrow HA1 2EE

Guildford Library

77 North Street, Guildford, Surrey GU1 4AL

Hammersmith Library

Shepherds Bush Road, Hammersmith W6 7AT

Hendon Town Hall

The Burroughs, Hendon, London NW4 4BG

Horsley Library

Parade Court, Ockham Road South, East Horsley,
Leatherhead KT24 6QR

Hounslow House

7 Bath Road, Hounslow, Middlesex TW3 3EB

Islington Central Library

2 Fieldway Crescent, London N5 1PF

John Harvard Library

211 Borough High Street, London SE1 1JA

Kensington Town Hall

8 Hornton Street, London W8 7NX

Kingston Library

Fairfield Road, Kingston KT1 2PS

Leatherhead Library

The Mansion, 68 Church Street,
Leatherhead KT22 8DP

London Borough of Sutton Offices

24 Denmark Road, Carshalton, Surrey SM5 2JG

Maidenhead Library

Saint Ives Road, Maidenhead SL6 1QU

Merton Civic Centre

London Road, Morden SM4 5DX

Old Windsor Parish Council Offices

Jubilee Hub, St Lukes Road, Old Windsor,
Berkshire SL4 2QL

Reigate and Banstead Town Hall

Castlefield Road, Reigate RH2 0SH

Richmond Reference Library

Old Town Hall, Whittaker Avenue,
Richmond TW9 1TP

Runnymede Civic Centre

Station Road, Addlestone, Surrey KT15 2AH

South Bucks District Council Offices

Capswood, Oxford Road, Denham,
Uxbridge UB9 4LH

Spelthorne Borough Council Offices

Knowle Green, Staines-upon-Thames TW18 1XB

Surrey Heath Borough Council Offices

Surrey Heath House, Knoll Road,
Camberley GU15 3HD

Swiss Cottage Library

88 Avenue Road, London NW3 3HA

The Curve Slough

William Street, Slough SL1 1XY

Three Rivers District Council

Three Rivers House, Northway, Rickmansworth,
Hertfordshire WD3 1RL

Twickenham Library

Garfield Road, Twickenham TW1 3JT

Uxbridge Library

High Street, Uxbridge UB8 1HD

Wandsworth Town Hall

Wandsworth High Street, London SW18 2PU

Watford Central Library

Hempstead Road, Watford, Hertfordshire WD17 3EU

West End Parish Council Offices

The Sports Pavilion, Benner Lane, West End,
Woking, Surrey GU24 9JP

Windsor Library

9 Bachelors Acre, Windsor SL4 1ER

Woking Borough Council Civic Offices

Gloucester Square, Woking, Surrey GU21 6YL

Xcel Sports Hub

Waterside Drive, Walton-on-Thames KT12 2JG

13. Next steps

Following the close of this consultation we will review our proposals, taking into consideration all of the feedback provided, alongside the findings of our ongoing evaluations and the feedback received through engagement.

We will then refine our masterplan and our proposals to build and operate a new runway at Heathrow. We will finalise our Environmental Statement and a range of supporting technical documents. We will also produce a Consultation Report which will set out details of the feedback received together with Heathrow's response and how it has been considered in the development of our application for a DCO.

We are on track to submit our application for a DCO to the Planning Inspectorate in 2020 and, subject to consent being granted, for our new runway to open in around 2026.

14. Consultation questions

This is our statutory consultation on our preferred proposals for Heathrow Expansion. Please use the feedback questionnaire to respond to our consultation. Your feedback is really important to us and we have used your feedback from our previous consultations to develop the proposals on which we are now seeking your views.

Masterplan

Expanding Heathrow is about more than building a new runway. To operate a three-runway airport, we also need to build passenger facilities, infrastructure and relocate or replace some existing buildings and land uses.

Our Preferred Masterplan sets out our plans for the future expansion of Heathrow. It has been developed taking into account feedback from previous consultations, as well as community, consumer and stakeholder engagement events and our ongoing design and assessment work.

1. Please tell us what you think about any specific parts of our Preferred Masterplan or the components that make up the masterplan.

i For more information on our Preferred Masterplan please see **section 3** of this document and the **Preferred Masterplan** document.

The expansion of Heathrow will require a number of existing buildings and community facilities to be moved, such as the Immigration Removal Centres at Harmondsworth and Colnbrook.

2. Please tell us what you think about the sites we have identified for buildings and facilities we are proposing to move.

i For more information on our preferred masterplan please see **section 3** of this document and **section 7.8** of the **Preferred Masterplan** document.

The boundary of an expanded Heathrow will be carefully designed to improve the overall appearance of the airport and help it blend into the surrounding area.

3. Please tell us what you think of our boundary design proposals to manage noise and the effects on views around the boundary of the expanded airport.

i For more information on the landscaping proposed please see **section 3** of this document and **section 7.9** of the **Preferred Masterplan** document.

Our Heathrow Expansion and Your Area documents set out our development proposals, their potential effects and how we propose to reduce them. The ten local areas covered are:

- Bedfont and Mayfield Farm;
- Brands Hill;
- Colnbrook and Poyle;
- Cranford, Hatton and North Feltham;
- Harlington and Cranford Park;
- Harmondsworth;
- Longford and Bath Road;
- Richings Park;
- Sipson; and
- Stanwell and Stanwell Moor.

i For more information on the effects of the Project on these local areas please see the **Heathrow Expansion and Your Area** documents.

4. Please tell us what you think about our development proposals and the measures proposed to reduce effects in these areas.

Construction

The expansion of Heathrow will require careful planning to ensure that it is successfully delivered in a way that considers the effects of construction on local communities, the environment and the transport network.

i For more information on our construction proposals please see **section 4** of this document and the **Construction Proposals** document.

5. Please tell us what you think of our construction proposals and the ways we are proposing to minimise effects on communities and the environment.

Future Operations

In response to our previous consultation, we have developed a combined runway alternation and night flights scheme which prioritises respite for communities closest to the airport in the evening, night and early morning periods.

As part of our plans for runway alternation, we are proposing four runway operating patterns. We would rotate between these patterns at either 2pm or 3pm and again at midnight each day. The sequence of these patterns will be repeated every four days.

i For more information on our runway alternation proposals please see **section 5** of this document and **section 3** of the **Future Runway Operations** document.

6. Please tell us what you think of our runway alternation proposals, in particular we would like to know if you think we should alternate the runways at 2pm or 3pm.

Section 5 of the Consultation document and section 4 of the Future Runway Operations document explains our preferred proposal for the length and timings of a ban on scheduled night flights. Our consultation materials also describe alternative options we have considered.

7. Please tell us what you think of our preferred proposal for a ban on scheduled night flights, and/or whether you would prefer an alternative proposal.

We plan to increase the number of arrivals and departures at Heathrow prior to the new runway opening, to respond to the urgent need for additional airport capacity.

i For more information on our proposals for early growth please see **section 5** of this document and the **Early Growth** document.

8. Please tell us what you think about our proposals for managing early growth.

Surface Access

Our proposals for public transport at an expanded Heathrow are based on:

- Making best use of existing public transport;
- Supporting committed improvements; and
- Developing new public transport routes.

i For more information please see **section 6** of this document and the **Surface Access Proposals** document.

9. Please tell us what you think of our proposals and how we could further encourage or improve public transport access to the airport.

We are proposing to introduce a Heathrow Ultra-Low Emission Zone by 2022, which will help us to manage emissions and encourage passengers to consider other modes of transport or cleaner vehicles. We are also proposing to use charging to supplement improvements to public transport and encourage its use, this is known as the Heathrow Vehicle Access Charge. This would be introduced from the opening of the new runway.

i For more information please see **section 6** of this document and the **Surface Access Proposals** document.

10. Please tell us what you think about our proposals for the Heathrow Ultra Low Emission Zone and Heathrow Vehicle Access Charge as ways to manage congestion and air quality impacts.

11. Do you have any other comments on our Surface Access Proposals?

Preliminary Environmental Information and Managing the effects of Expansion

Our Preliminary Environmental Information Report carefully considers the effects that expansion may have on the environment and provides measures to reduce them or improve the current environment wherever possible.

i For further information please see **section 7** of this document and the **Preliminary Environmental Information Report**.

12. Please tell us what you think about our proposals to manage the environmental effects of expansion.

Our surface access proposals will help us manage airport-related emissions and our Preferred Masterplan has been designed to reduce the impact of the airport on local air quality. Chapter 7 of the Preliminary Environmental Information Report, published as part of this consultation sets out in detail the work we have done to assess the effects on air quality from the construction and operation of an expanded Heathrow.

i For further general information on air quality please see **section 7.1** of this document and **Chapter 7** of the **Preliminary Environmental Information Report**.

13. Please tell us if there are any other initiatives or proposals that we should consider in order to address the emissions from airport related traffic or airport operations?

The health and well-being of our passengers, colleagues and neighbours is important to us and we have carefully considered the effects expansion may have on them.

i The outcomes of our preliminary health assessments are explained in **section 7.3** of this document and **Chapter 12** of the **Preliminary Environmental Information Report**.

14. Please tell us what you think about our proposals to help health and well-being. Are there any other proposals that you think we should consider to address the effects of the Project on the health and wellbeing of our colleagues, neighbours and passengers?

We are proposing to introduce three noise insulation schemes for eligible local residents to address the effects of noise from an expanded airport. These will open in stages and prioritise properties in the highest noise areas.

i For more information please see **section 7.4** of this document, the **Proposals for Mitigation and Compensation** document and the draft **Noise Insulation Policy** document.

15. Please tell us what you think about our noise insulation schemes.

Noise is one of the biggest concerns for communities living close to airports. We are proposing to introduce new and improved ways to manage noise at an expanded Heathrow such as introducing a 6.5 hour scheduled night flight ban, utilising runway alternation and developing a noise envelope.

i For further general information on noise please see **section 7** of this document and **Chapter 17** of the **Preliminary Environmental Information Report**.

16. Please tell us what factors are most important as we develop our proposals for noise management, in particular our proposals for the design and implementation of a noise envelope.

Heathrow is a cornerstone of the local economy and we are one of the largest single-site employers in the country. Expansion will provide a range of new employment and training opportunities.

i For further information please see **section 7** of this document and **Chapter 18** of the **Preliminary Environmental Information Report** and the **Economic Development Framework** document.

17. Please tell us what you think of our proposals for maximising new jobs and training. Are there any other ways that we can maximise skills and training opportunities to benefit our local communities?

The expansion of Heathrow presents both challenges and opportunities for the historic environment and for the historic buildings and features which may be affected. We have set out in the Preliminary Environmental Information Report a series of historic environment principles that are informing the design and development of the expansion of Heathrow and have included a number of measures within the scheme design to minimise effects on the historic environment. We are proposing four historic environment strategies that will address effects on the historic environment.

i For further information please on the effects on the historic environment please see **section 7** of this document, **section 7.10** of the **Preferred Masterplan** document and **Chapter 13** of the **Preliminary Environmental Information Report**.

18. Please tell us what you think about our approach to addressing effects on the historic environment, including any particular proposals you would like us to consider.

Environmentally Managed Growth

We are proposing to operate an expanded Heathrow within a set of strict environmental limits which would be monitored and enforced by an independent body.

i For further information please see **section 8** of this document and the **Environmentally Managed Growth** document.

19. Please tell us what you think of our proposed approach to manage the future growth of the airport within environmental limits. Is there anything else we should consider as we develop the framework and its potential limits?

Community Fund

We are proposing a new Community Fund to help address the positive and negative effects of the Project and to improve the quality of life in the area around the airport.

i For further information please see **section 9** of this document and the **Proposals for Mitigation and Compensation** document.

20. Please tell us what you think about our proposals for the Fund, including what it is spent on, where it is spent, and how it should be funded and delivered.

Property and Compensation

People who live in or own property near Heathrow airport could be affected by its expansion. We will need to acquire areas of land which currently include residential, commercial and agricultural properties.

We have prepared the interim Property Policies to explain our general approach to buying properties and land and set out the discretionary compensation offers available for eligible properties. These discretionary offers are intended to enhance the terms available under the Statutory Compensation Code for eligible properties, but do not change your statutory rights.

i **Section 10** of this document and the **Property Policies Information Paper** set out a summary of the interim Property Policies.

21. Please tell us what you think about our interim Property Policies, including our general approach to buying properties and land and our approach to compensation, including our discretionary compensation offers.

Development Consent Order

To get permission for our expansion proposals we will need to apply for a specific type of permission called a Development Consent Order (DCO). The DCO will contain the legal powers we need to build and operate the expanded airport. It will also place certain constraints on us, including obligations to minimise and reduce the effects of expansion and to pay compensation for land that has to be compulsorily acquired.

i For more information about the DCO process and on what we think will need to be contained in our DCO, please see our **How do we obtain approval to expand Heathrow?** document.

22. Do you have any comments on what we think will need to be contained in our DCO and do you have any views on anything else the DCO should contain?

General comments

23. Do you have any other comments in response to this consultation?

24. Please give us your feedback on this consultation (such as the quality of the documents, website and events).

Thank you for your time

Equalities Questionnaire

Please help us by completing our monitoring form. This helps us to check that no group of people is missed out from taking part in the consultation.

Thank You

Your feedback is really important to us and we have used your feedback from our previous consultations to develop the proposals on which we are now seeking your views.

Notes (Please use this page if you require space to make notes about this consultation)

Large empty rectangular area for taking notes.



**AIRPORT
EXPANSION
CONSULTATION**

There are lots of ways you can contact us or find out more



Find all the consultation information on our website
aec.heathrowconsultation.com



Email any questions about the consultation to
info@heathrowconsultation.com



Follow @LHRconsultation to stay
up to date on event details



Call our freephone number 0800 307 7996
(open Monday to Friday, 9am-6pm)

If you would like a large text or alternative format of this document,
please contact 0800 307 7996 or email info@heathrowconsultation.com

